THE

# *CALCUTTA REVIEW.*

## VOLUME CI.

## October 1895.

*No man who hath tasted learning but will confess the many ways of profiting by those who, not contented with stale receipts, are able to manage and set forth new positions to the world: and, were they but as the dust and cinders of our feet, so long as in that notion they may yet serve to polish and brighten the armoury of truth, even for that respect they were not utterly to be cast away.*—MILTON.

CALCUTTA:
PRINTED & PUBLISHED BY
THOMAS S. SMITH, CITY PRESS, 12, BENTINCK STREET
MESSRS. THACKER, SPINK & CO., GOVERNMENT PLACE, N.
AND TO BE HAD OF ALL RESPECTABLE BOOK-SELLERS IN CALCUTTA.
MADRAS: MESSRS. HIGGINBOTHAM & CO.
LONDON: MESSRS. KEGAN PAUL, TRENCH, TRÜBNER & CO., Ld.
PATERNOSTER HOUSE, CHARING CROSS ROAD, LONDON, W. C.
All Rights Reserved.

ESTABLISHED 1815.

# AHMUTY & CO.,

CALCUTTA & CHITTAGONG

## *Engineers & Contractors,*

## MACHINERY, METAL & HARDWARE MERCHANTS,

*Ship Chandlers, General Storekeepers,*

ROPE, SAIL & PAULIN MAKERS,

**WINE MERCHANTS,**

PROVISIONERS, AGENTS, &C., &C.

**HEAD OFFICE AND STORES:**

*6, CHURCH LANE, CALCUTTA.*

Telephone Nos. 141 & 142.

**BRANCH OFFICE AND STORES:**

*STRAND ROAD, CALCUTTA.*

**BRANCH OFFICE AND STORES:**

*CHITTAGONG.*

**ENGINEERING WORKS AND FOUNDRY:**

*HOWRAH FOUNDRY, HOWRAH.*

Telephone No 516.

**Rum & Spirits of Wine Distillery, Paulin, Crushed Food and Indian Condiment Manufactory, Biscuit Bakery & Steam Flour Mills:**

*ALBION WORKS, HOWRAH.*

Telephone No. 512.

**STEAM ROPE WORKS:**

*SHALIMAR, HOWRAH.*

Telephone No. 507.

# WINES & SPIRITS.

## FOR INVALIDS.

**INVALIDS' PORT.** A very popular Wine. For delicacy of flavor and softness, added to comparative absence of alcohol, it is most suitable for those who require a mild stimulant when debilitated from the effects of tropical ailments. **Rs. 34 per dozen.**

---

**INVALIDS' SHERRY** is a Wine that we can very highly recommend as a light Wine and a stimulant. It has no superior. Invalids should try it. ... ... **Rs. 38 per dozen.**

---

**VOLNAY.** A very choice Burgundy, invaluable as a blood making Wine to those suffering from weakness brought about by fever or dysentery. ... ... **Rs. 30 per dozen.**

---

**C. P. & CO.'S FOUR-STAR COGNAC** Without doubt the very finest obtainable in India. Dr. Macadam says :—" I find it to be of excellent strength, thoroughly matured by age, and free from all noxious ingredients." A grand restorative. **Rs. 50 per dozen.**

---

**PALL MALL WHISKY.** A thoroughly well-matured Scotch Whisky, **11 years old.** A Doctor writes : " It is the purest and best obtainable in India." A good stimulant in cases of Typhoid fever. ... ... **Rs. 42 per dozen.**

---

**Discount on above prices for Cash is 10 %**

---

# CUTLER, PALMER & CO.,

# CALCUTTA.

# CALCUTTA REVIEW.

## No. CCII.

## CONTENTS.


| | | PAGE. |
|---|---|---|
| ART. I. | RECOLLECTIONS OF AN INDIAN CIVILIAN ... | 225 |
| „ II. | THE GEOGRAPHICAL DISTRIBUTION AND MUTUAL AFFINITIES OF THE INDO-ARYAN VERNACULARS ... ... ... ... | 258 |
| „ III. | INDIAN FOREST METEOROLOGY ... ... | 275 |
| „ IV. | OMAR AND THE ALEXANDRIAN LIBRARY ... | 313 |
| „ V. | MAN AND WOMAN ... ... ... ... | 322 |
| „ VI. | CASTE AND COLOUR IN ANCIENT INDIA ... | 336 |
| „ VII. | BENGAL: ITS CASTES AND CURSES ... ... | 367 |
| | *Independent Section*—(*Continued from No. 201, July* 1895.) | |
| „ VIII. | THE PRESENT SITUATION IN THE BRAHMO SOMAJ ... ... ... ... | 391 |
| „ IX. | MAHMUD OF GHAZNI AND THE LEGEND OF SOMNATH ... ... ... ... | 402 |
| „ X. | THE FIRST INDIAN MEDICAL CONGRESS ... | 413 |
| THE QUARTER ... ... ... ... ... | | 423 |
| SUMMARY OF ANNUAL REPORTS:— | | |
| 1. | Annual Report on the Police Administration of the Town of Calcutta and its Suburbs for the year 1894. By the Hon'ble Sir John Lambert, K.C.I.E., Commissioner of Police, Calcutta. Calcutta: Printed at the Bengal Secretariat Press. 1895 ... ... ... ... | 436 |
| 2. | General Report on the Survey of India Department, administered under the Government of India during 1893-94. Prepared under the direction of Colonel Sir Henry R Thuillier, K.C.I.E., R.E., Surveyor General of India. Calcutta: Office of the Superintendent of Government Printing, India, 1895 ... ... | 437 |
| 3. | Report on the Legal Affairs of the Government of Bengal for the year 1894-95. Calcutta: Printed at the Bengal Secretariat Press. 1895 | 439 |
| 4. | Administration Report on the Jails of Bengal for the year 1894. By Surgeon Lieutenant Colonel D. W. D. Comins, Inspector-General of Jails, Bengal. Calcutta: Printed at the Bengal Secretariat Press. 1895 ... ... | 440 |
| 5. | Report on the Excise Administration of the North-Western Provinces & Oudh for the year ending 30th September 1894. Allahabad: North-Western Provinces and Oudh Government Press 1895 ... ... ... | 442 |

CRITICAL NOTICES :—

I.—General Literature :— PAGE.

1.—Two in the Bush and Others Elsewhere. By F. Frankfort Moore ... ... xxii
2.—Peter Steele, the Cricketer. By H.G. Hutchinson *ib*
3.—The Burden of Woman. By Richard Pryce ... *ib*
4.—Thirteen Doctors. By Mrs. J. R. Spender ... xxiv
5.—Alice Lauder. By Mrs. J. Glenny Wilson ... *ib*
6.—Under God's Sky. By the Author of "A High Little World" .. ... ... xxvi
7.—The Martyred Fool. By David Christie Murray *ib*
8.—Neighbours of Ours. By Henry W. Nevinson xxviii
9.—By Order of the Brotherhood. A story of Russian Intrigue. By Le Voleur ... ... *ib*
10.—Tess of the D'Urbervilles - A pure Woman faithfully presented. By Thomas Hardy. *ib*
11.—Essay on the Common Features which appear in all forms of Religious Belief. By Robert Needham Cust, L.L.D, Barrister-at Law, Honorary Secretary of the Royal Asiatic Society, Late Member of Her Majesty's Indian Civil Service. London : Luzac & Co., 46, Great Russell Street. 1895 ... .. ... xxix
12.—The Diseases of the Will. By Th. Ribot. (The Religion of Science Library). Chicago, the Open Court Publishing Company. 1894 ... xxxii
13—Central Provinces in the Viceroy's Legislative Council, Calcutta Sessions, 1893-94. 1894 95. Printed at the Reliance Press, Calcutta ... xxxiv

Vernacular Literature :—

1.—Govindadáser Karachá—Edited by Jaya Gopal Gosvami. First edition, Calcutta. Printed at the Metcalfe Press, No 1, Gour Mohan Mukerjee's Street, Calcutta. Published at the Sanskrit Press Depository, 20, Cornwallis Street, Calcutta. Saka 1817. ... ... xxxv
2.—Bráhmachári—Printed by N. C Bose & Co., 7, Bhim Ghose's Lane, Great Eden Press, Calcutta. Published by Shri Kali Ghosh, at 7, Umesh Chandra Dutta's Lane, Calcutta. xxxvii
3.—Bangasáhitye-Bankim—By Háran Chandra Rakshit. Printed by Kabal Ram Chattopadhya, at the Bangabási Steam Machine Press, 34-1, Colootolla Street, Calcutta, and published by Bipin Behary Rakshit, 24-Perghanas, Majilpur ... ... ... xxxix
4.—Barnâsram Samáchár, Pratham Khanda, Pratham Bhág,—By Pundit Madhu Sudan Shiritiratna : Bhatpárá. Printed by Rakhal Chandra Bhattacharjya, and published by Prio Brata Chackravarti, 29, 30, Sib Narayan Dass' Lane, Calcutta ... ... xl
5.—Sri-Nabadvip Tattwa. Printed and published at the Sabitri Press, Hugli. By Hari Das Pal. xli

Acknowledgments ... ... ... ... ... xliv

**PREMIUMS MODERATE. CONDITIONS LIBERAL**

# THE STANDARD

ESTABD. 1825.

## LIFE OFFICE.

**THE NEW ASSURANCES** *have exceeded £1,000,000 per annum every year since 1865,—a result maintained uninterruptedly for so long a period by no other* **British Office.**

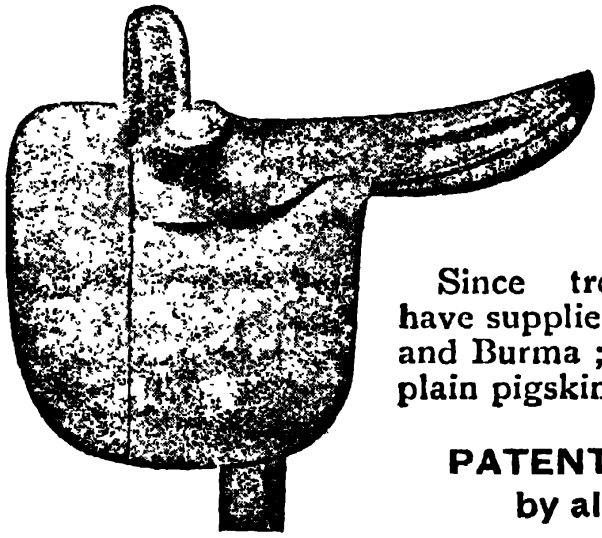
**THE FUNDS** *have increased* **50 per cent.** *during the last 15 years, and now amount to* **Eight Millions Sterling.**

**DOUGLAS STEWART,**
*Secretary.*

4, COUNCIL HOUSE STREET,
CALCUTTA.

## CUTHBERTSON & HARPER,

***10, GOVERNMENT PLACE.***



### SPECIALITIES.

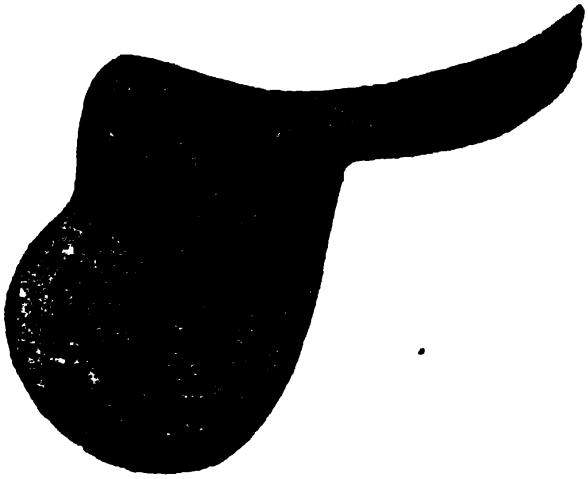
**Our LEVEL SEAT SIDE SADDLE made on patent "Cut Back" Trees and from best material.**

Since troducing these Saddles, we have supplied them to all parts of India and Burma ; they are made with either plain pigskin or quilted doeskin seats.

**PATENT SAFETY STIRRUPS by all the best makers.**

## OUR "NEWMARKET TRAINING SADDLE."

Suitable for POLO or any other purpose where a light saddle is necessary ; weight about 7lbs. One of the lightest, strongest, and smartest Saddles introduced to the Indian market. Flaps well cut forward.



# English Printing Papers

# JOHN DICKINSON and CO'S

## MANUFACTURE

AWARDED THE ONLY GOLD MEDAL,

Calcutta International Exhibition 1883-84.

## SUPERFINE * WHITE * PRINTING,

*GOOD COLOR, HIGH FINISH & SURFACE.*

A large variety of sizes and weights always in stock at

As. 3-3 per lb.

## JOHN DICKINSON & CO., LD.,

*7, NEW CHINA BAZAR STREET, CALCUTTA.*

*ALSO AGENTS FOR*

H. W. CASLON & Co.'s

**TYPE,**

B. WINSTONE & SON'S

**INK,**

HOPKINSON & COPE'S

PRESSES,

AND

T. H. SAUNDERS & Co.'s

Well-known Hand-made Papers.

PUBLIC LIBRARY
ESTABLISHED
1859
UTTERPARA

THE
# CALCUTTA REVIEW.

*No. 202.—OCTOBER 1895.*

## ART. I.—RECOLLECTIONS OF AN INDIAN CIVILIAN.

By HENRY GEORGE KEENE, C. I. E., M. A., OXON.

### CHAPTER III.

### 1849—1856.

THE next seven years were apprentice-years, during which one had a certain share of power and responsibility, but was kept, very properly, from uncontrolled work excepting on occasional necessity and for a very short time. The glamour of the past gilds the mists; and the vague memory of early manhood comes to mind with an almost romantic pathos. But reason reminds one that there was really much dulness and much difficulty surrounding the daily task in so strange a scene. As a station for Europeans, Muttra was in those days open to many objections; and one's life, for six or seven months of the year at least, might have been curtly described by the first line of Goldsmith's *Traveller*:—

"Remote, unfriended, melancholy, slow."

Or, if "unfriended" be too strong an expression, another word may be sought which should indicate that one saw few friends, and of them sometimes saw too much. Coupled together in work, meeting again when they got home, fellow-sufferers from boredom, heat, and ill-health, men (not to say women) in small up-country stations before the days of railways, must have often longed for a larger circle of existence. A few years later it was my fate to pass one hot season in a station to which there was no carriage-road, and the only other white resident was insane.

Muttra, before the Mutiny, was not quite so bad as that. Although railways did not exist—either there or in any other part of India—there was a metalled road from Agra. The city and neighbourhood were interesting; and the European society contained, besides the civil staff, a regiment of native cavalry and a "troop," as it was called, of Bengal horse-artillery; some score of European Officers were attached to these corps; there were several accomplished men among them, and

some agreeable ladies. On the whole, it was possible to pass a summer in Muttra Cantonments without hating anybody, even one's most intimate friends.

The antiquarian and historical interests of the town and district may be found in the *District Memoir* by the late Mr. F. S. Growse, C. I. E., a profound Hindi scholar, who long held office there, and who—wherever he might be stationed—always devoted himself to local studies with honourable zeal. Enough for the present purpose may be stated in a few words. The district is the Holy Land of that large section of the Hindus amongst whom Vishnu is the chief object of adoration, and the chief representative of that deity is the demi-god Sri-Krishna, alleged to have been born there: the exact site of his birthplace being traditionally ascribed to Mahában, a village on the opposite bank of the Jumna to Muttra city, and about six miles lower down the river. Down to the later times of the Moghuls the district was still largely uncultivated and covered with forest; and it had been a sacred home of Buddhism, probably, before the Krishna myth arose. The circuit of over 150 miles of which Muttra may be called the centre, is known as "Brij Mandal," and it teems with monuments and shrines connected with the hero and his kindred. The circuit of pilgrimage is partly coincident with that pursued by foreign tourists; and the first stage, westward, is a small but very holy town called Govardhan, where there are two large masonry reservoirs, each surrounded by temples, tombs, and stone-steps for the use of bathers. In the autumn feast of the *Diwáli*, when the new moon of the month of Kárttik is seen, the Hindus of the neighbouring towns and villages collect at Govardhan to worship Lakshmi, the goddess of fortune, bathing and lighting lamps; and it was the custom for the District Officer to go to the place and pitch tents, where he not only watched the celebration in the cause of order, but entertained such of the European ladies and gentlemen as might desire to be spectators. It was a curious and interesting experience. The camp of the local magnate—an accomplished man, one of the Caledon family, who afterwards became a Companion-of-the-Bath—was set up at "Suraj Mall's Chuttry," in the depth of a wild wood, where the monument of the founder of the Bhurtpore State fronts a vast reservoir with stone steps and carved jetties: a venerable banian-tree shading the southern side, with pendent branches sending shoots towards the ground, and affording shelter for the tents. Hence, after dark, we proceeded, on elephants, to the tank of Baldeo Sing, the last but one of the Bhurtpore Princes, where we found the vast multitude collected on the lofty stairs that led down to the water. All the walls and towers were illumi-

nated; and from time to time some one would send a clay lamp floating on the murky water; and a muffled roar, accompanied by a clapping of innumerable hands, would break the silence.

In the following spring I had my first experience of district work in the fields and without immediate guidance. The season was hot and dry; heavy hail-storms accompanied the setting in of the hot weather; and the people complained that their crops were ruined, so that they could not pay the share of the rent which, in the East, forms the back-bone of the State-revenue. Accordingly Mr. Alexander sent me to examine the afflicted tracts, making notes of the state of the harvest, and write a report for him to submit to the Board. The service was trying; but it was one that had to be entrusted to some one who, whatever might be his deficiencies in point of experience, might be trusted to be more impartial than the native Sub-Collector. A word of explanation may be permissible here. The word "Collector" suggests to English ears an official—however respectable—who is in a strictly subordinate position, calling on householders for their rates, with an inkhorn fixed in the buttonhole of his coat. In India it means something considerably higher, which is unknown in British institutions, combining the position of a Deputy-Lieutenant with some of the duties of a Chairman of Quarter-Sessions. At the time of which I am writing, the Collector and Magistrate of a District was the representative of the Government in a region of perhaps 3,000 square miles, with an average population of, say, a million of human beings; and an administrative factotum to a greater extent than now, when the division of labour is better understood and more practised. Thus, my chief was not only the head of the correctional tribunals of the whole district and of the police; he was also responsible for the roads, the ferries, the jails; he had to control the accounts of the local treasury, being further responsible for the collection of the dues and taxes by which it was replenished, and for the periodical transmission of the contents to head-quarters. He had even to inspect the public dispensaries, to direct the rude municipal management of large towns, and—since Mr. Thomason's educational reform,—to inspect and stimulate the national schools. To aid him in these multifarious occupations, he had usually two European members of the "Covenanted Service" at the central station; while the district was divided, for administrative purposes, into some half-dozen *Tahsils* or fiscal unions, each under a native officer, called—in that part of India—*Tahsildár*, the same that has been above called "Sub-Collector." This official controlled the actual agrarian affairs and the payments of the heads of villages and other

landholders, and was also an "*Officer of Police*" and often a "*Deputy Magistrate.*" Such was the rural magnate whom I was now to accompany in his enquiries, ascertaining the extent of the calamity in each estate or township, and preparing the materials on which Mr. Alexander was to base his report to the Board, with recommendations as to the amount of demand to be suspended, or altogether remitted, as the case might be. It was my first responsible charge; and I hope that it received all due attention. The Sub-Collector was a high-born Saiad—a descendant of the prophet Mahomed; and I recollect how, after the labours of the day were ended, we sate together and exchanged opinions and information on many matters beyond the immediate object of our mission.

The occupation was instructive, if somewhat exhausting; and I returned to Muttra, when it was over, improved in local and general knowledge, but considerably affected in bodily strength. I succeeded, however, in producing a report which satisfied my superiors, and received, in due course, the favourable acknowledgments of the Board. The year wore on, in sickness and depression for myself, in drought and distress—which was far worse—for the people of the district. Clouds gathered, to be anxiously watched, as we sate gasping in our gardens of an evening, after the sweltering day was done: but the rain held off till all expected one of those periodical famines for which India has such an unhappy reputation. The last calamity of this kind, in Hindustan Proper, had come to an end in 1838, and another was now about due, as droughts in that region occur, usually, at intervals of eleven years. The present instance, fortunately, proved to be neither of wide extent nor of long duration: nevertheless it was a time both of mental anxiety and of physical suffering while it lasted.

One personal consolation I had, in the conclusion of my last period of probation. The systematic examinations which have since added so much to the troubles of young officers were then only menaced; in the mean time we were judged in a less formal, but not perhaps less effectual, way. By the method adopted soon after—and still, I believe, in force—a young man has to prepare by study for a set of questions on law (police and revenue,) and for written and colloquial tests in the vernacular of his province; and he can hardly attain proficiency otherwise than by actual study. In the earlier days the problem was dealt with in a rougher, but more practical, manner; "solved in walking," so to say: the object being to ascertain the amount of zeal and intelligence which the young officer had brought to bear upon his work during his pupillary stage. It might be objected that his knowledge must have been gained at the expense of the people; but in all learning of this

kind there must be experiment, even if the experiments occasionally involve vivisection. Besides, we had very little power; and if a competent and conscientious chief was at hand to control, and a more experienced colleague was ready to advise on reference, the mischief done might be reduced to a minimum. The native staff was composed of able and practised hands, who doubtless took some advantage, to their own profit, of the young officer's ignorance; but, with due vigilance on his part, and a knowledge on theirs that they would undoubtedly suffer most severely if their machinations came to light, one hoped that here also less harm ensued than might be feared on first judgment.

In any case, my probation came to an end. Accompanied by a confidential report from Alexander, some of the notes of revenue-work and judgments in petty trials went before the Lieutenant-Governor; and he, on due consideration of this material, was pleased to find one capable of exercising "full powers" and to gazette one's name for transfer to another district as "Joint-Magistrate." The new district was Mynpoory, where I found two friends, both of whom afterwards obtained distinction as puisne judges of the provincial High-Court. The senior was Robert Spankie, son of a well-known lawyer and politician, Mr. Serjeant Spankie, M. P. Him I succeeded as Joint-Magistrate and Deputy Collector. The junior was the gentleman who has since become Sir Richard Oldfield. Our chief was Charles Raikes, a good officer and skilful writer on professional subjects, whose *Notes on the North-West Provinces* had lately attracted attention, and may be still read with pleasure and profit by those who care to have an insight into the rural life of Hindustan. Mr. Raikes, with equal knowledge and sympathy, exhibits a condition of society still, I suppose, maintained in the more sequestered parts; the homestead and the wells bathed in rich crops and shaded by odorous mango-trees; the tribal hospitalities, the family jars, the accountant, the banker, and all the simple machinery of village economy. Mynpoory was a more accessible district than Muttra; and the duty of providing for the peace and plenty of the Grand Trunk Road devolved on its Collector. This vast undertaking, already mentioned, has been entirely eclipsed since those days, the East Indian Railway running nearly parallel and taking the through traffic. But, at the time of which I write, it was in full work up the whole great *thalweg* from Calcutta to Kurnal; a metalled causeway, with avenues of trees on the berms, and, at distances of ten or twelve miles, a camping ground with stores and market, a caravansarai for Asiatic travellers, and a resthouse for Europeans. This great work had been originated by Lord William Bentinck, and was

maintained by the Central Government; but the charge of the supplies and the stations devolved on the authorities of the various districts through which it might pass; and those of Mynpoory were, for the time, entrusted to me.

The weather was still very hot, owing to the holding off of the monsoon; and I have a vivid recollection of that autumn, passed under canvas for the most part. Our little household had been increased before we left Muttra; a child had been born to us, and we had also undertaken the charge of a young orphan of Musalman origin, named Khairáti, who followed us to our new district. He was a well-conducted lad, with gentle manners, who ultimately became an ordained minister under the style of "The Reverend William Plumer."

All were in a state of more or less prostrated strength, when, one morning, about Christmas, a letter arrived from Agra announcing that His Honour the Lieutenant-Governor had been pleased to appoint me to be Assistant-Superintendent at Dehra Doon. It was, perhaps a commencement of trouble—had one only known it—; and I afterwards heard that the worthy patron whose kindly favour had selected me for the post, had expressed some doubt as to the future that he was preparing for me. The Doon was a miniature district, with a sparse population and a scanty revenue; and he knew that the light work and remote situation might prove a Capua for a young officer. But he knew that my health was not good; and he, doubtless, hoped that a year or two of comparative rest in a good climate might set up his protegé and qualify him for renewed exertion hereafter. And if his honoured life had been prolonged, Mr. Thomason might have aided the fulfilment of any such plan that he might have been good enough to entertain. To us, at the moment, the change appeared an unalloyed benefit; and surely no one entering that lovely valley, in a bright, sunshiny morning in January, could have felt any misgiving. As we rode down the romantic gorge of the Mohan Pass, we saw before us the wooded hills standing out among the shining streams, and fields rich with sugar-cane and other young crops of tender green; blossoming trees shaded the rose-bordered road, while, in front, at a distance of ten or twelve miles, rose the lower range of the Himalayas, with the white cottages of Mussoorie and Landour scattered like sheep about the summits.

We were hospitably received by my new chief, Mr. Alexander Ross, the Superintendent of the Doon, and soon experienced the relief from the heat and drought of the plains that we had left behind us. The work proved to be easy; the Superintendent was also Civil Judge, and gladly left the executive work to his Assistant. I had to attend to the police reports and summons-cases, the jail, roads, and treasury; all on a smaller

and simpler scale than had been the case in the more important districts where I had spent the greater part of the last two years.

Soon after my arrival, I made my first visit to the sanitarium of Mussoorie, which, for years to come, was to be the nearest approach to a "Home" that India was to afford us. The excursion is worth mentioning only for the extraordinary severity of the weather, which struck one particularly after the more than tropical heat that one had experienced, a few months before, at no great distance. On attaining a height of about 6,000 feet, my companion and self were fain to dismount and lead our horses, one of which presently broke away and disappeared in a snow-drift. The whole mountain was a white and shapeless mass; and it was not without difficulty that, as darkness was falling, we succeeded in reaching the house of a friend who gave us dinner and a shakedown for the night. Before morning many wanderers, less fortunate than ourselves, had perished in the snow.

The next two years were spent partly at this hill-station, though never again in such Arctic conditions. In spring it was delightful to hear the invisible cuckoo calling from the sides of the hills, clothed with wood, and bright with the crimson blossoms of the rhododendron; and when the summer drew on, the mornings were embalmed in the breath of the wild rose, and the dewy evenings illuminated by the starlight of unclouded skies. The rainy season, too, was not without a sombre charm, when a tide of white cloud swept up from the Doon and swallowed up the landscape, opening at times to reveal glimpses as of some enchanted vision. The drawback was in the necessity of frequent visits to the Doon, where—at that time—the offices and courts remained open all through the year. The old road, by Jhirrapani and Rajpore, was very steep, and apt to be blocked by sudden falls of shale and stones; it was a hot ride, sometimes in soaking rain; and when one got to Dehra, the scene was apt to be indescribably depressing; a dripping solitude, where fatigue and sudden chill turned readily to fever.

I have very little other recollections of this first residence in the Doon. One winter we had the pleasure of receiving, in our little cottage at Dehra, the correspondent of the *New York Tribune*, Bayard Taylor, afterwards U. S. Ambassador in Prussia. He was then a slim young man with a Bedouin cast of countenance, who, after wide travel in Europe and America, had come to India by way of Asia Minor and Egypt, and who brought us letters from friends, notably Baird Smith, of the Bengal Engineers, the husband of De Quincey the "Opium-eater's" daughter. A man of general ability and experience, Taylor united a poet's imagination with a most remarkable

power of expression; using—perhaps sometimes abusing—the art of the "word-painter." He visited the monuments of Moghul architecture with my friend Sherer; and his descriptions, always picturesque, were more accurate than they might have been under less skilled inspiration.*

Another recollection of this period is the visit to Mussoorie of the young Maharaja Duleep Singh, who came up from Futtehgurh, accompanied by his guardian, Sir John Login, and occupied the house known as "The Castle," above the Landour bazaar, which we had rented in the previous season. He had lately become a Christian, and seemed a gentle and happy youth, of whose sad and stormy future no symptoms were perceptible. The story of his after-life is mostly told in Lady Login's memoir of her husband.†

The life of a Magistrate in an Indian watering-place is now probably pleasanter than it was in the middle of the 19th century. The Superintendent of the Doon has now a good court-house, with offices, in a central part of Mussoorie; and he, or the subordinate to whom he may entrust that portion of his duties, can carry on work in a good climate, without the constant expense and exposure of going every week to Dehra. Organisation, too, is probably better, and public opinion stronger and more healthy. In the days of my assistantship the European element was not easy to control; and strange quarrels used to come before one, sometimes in court, sometimes elsewhere. A gallant Colonel of Irregular Cavalry once carried irregularity so far as to chastise a policeman who endeavoured to enforce a municipal rule against exercising dogs on the "Mall;" and when I threatened to fine him, sent "a friend" to me. By letting the matter drop I probably saved his commission. He was afterwards murdered by his own men.

In the beginning of the hot season of 1853, Mr. Thomason, thinking, perhaps, that I had been long enough in Capua, sent me as Joint-Magistrate to Hurriana, where we had to take up our abode at Hissar, near Hansi, once the capital of the "Sailor-Raja," George Thomas. We could get no house in the tiny "station," and had to fit up a few rooms on the city-wall, with the native town on one hand and a desolate white road on the other. Nothing could exceed the dulness of this remote place, on the very edge of the great Bikaneer Desert, and itself only accessible by the help of camels. The chief vegetation indigenous to the sandy soil was only scanty brushwood of the *Babool* (gum Arabic) and the *Farāsh* (Tamarisk); and all about were wide plains mainly tenanted by antelope

* See *Visit to India, China and Japan.* 1855.

† W. H. Allen and Company. 1890.

and bustard. Everyone kept greyhounds, and there was good shooting.

The greater part of the next eighteen months passed almost without events in this sequestered scene. The district forms part of the old "Delhi-territory;" and has been, since the Mutiny, a part of the Punjab Province. While I was there, it was attached to the "North-West" Lieutenancy, but under somewhat peculiar regulations, among which one of the most singular, was one concerning cattle-lifting which may justify a passing notice. It was a consequence of the conditions of the district, that oxen and cows were easily found straggling in search of the scanty pasture, and equally easily driven off through the jungles by lawless men. From time immemorial, therefore, the custom called "*Khoj*" had prevailed; whenever a herdsman lost any of his cattle, he took up the track of their footsteps across the roadless plain; and, on arriving at the first village where they seemed to stop, he was entitled to demand restitution unless the villagers could satisfy him that the track had passed on, when the responsibility was transferred to the inhabitants of the next place. This custom, reduced to a system and entrusted to the police, afforded a remedy, more effectual than strictly lawful, for a great social evil. The villagers with whom the last *Khoj* remained, by reason of their inability to carry it further, were held answerable; not to the criminal law, however, but to specific damages.

Before leaving Hissar, I, too, had a little piece of detection to do which may be worth recording. It has been already mentioned that the divorced wife of my French Creole friend D.——had left the Mauritius with her daughter, and that I had engaged to trace her, if—as was believed—they had come to India. I now, unexpectedly, came upon the track of these unhappy fugitives in the neighbouring state of Nābha. My police ascertained that, some years back, a European woman, with a female child, had arrived one night at the small capital, and had sought assistance from the Rāja, a Jāt chief, named Debendra Singh. The Rāja agreed to employ the lady as a musician, and she took up her quarters in the palace with her daughter. Time passed, and the Rāja was deposed for complicity with the Sikhs in the Punjab wars, and sent to Hindustan on a handsome pension. He had been allowed to reside at Bindrabun, in the Muttra District, where, indeed, he had been when we were at Muttra. It was now believed that the lady had died, but nothing was known of the daughter. Seeing that these facts pointed strongly to Mme. D.———,I next wrote to the Magistrate of Muttra, relating them briefly, and begging him to make further enquiries. It then came out that the mother and daughter had been those that I surmised;

but the mother was now dead and the daughter had entered the Raja's *zenana*. As he now represented her to be his wife, and as she, for her part, firmly refused to leave him, nothing more could be done; and poor M. D. had to give up all hope of being ever again united to his family.

The one great event of that time, for India, as for his many friends and admirers, was the premature death of the Lieutenant-Governor, of which a pathetic account is given in Sir R. Temple's book already cited. On the 14th September, 1853, he had been appointed Governor of Madras; but on the 27th he died, unconscious of the great honour. On the 3rd October Lord Dalhousie recorded the Minute an extract from which was given above, and published it in the *Gazette* as a notification to all India. In my humble way, I endeavoured to testify my admiring regret in some lines that were, I believe, inserted in the leading local paper; I only recollect the following:—

"He died—true champion—with his armour on,
The blameless leader of a mild crusade;
All selfish yearning for repose foregone,
Till God's own pitying hand the labour stayed;
He loved the poor; ah! Never be it said,—
'They praised him, living, but forgot him dead.'"

Thomason's successor, Mr. John Russell Colvin, came to us from the Lower Provinces, selected by Dalhousie, by reason of a high reputation for industry and intelligence: he had been Private Secretary to Lord Auckland during the troubl ewith Dost Muhamad in 1838; and an interesting account of his services has been written by his distinguished son.* Sinister influences were now to arise and cloud the rest of my path; but they did not originate with Mr. Colvin. Like his predecessor, he had been trained in Oriental learning by my father, and he showed to his old Professor's son a good deal of the same kindness. During the cold weather a scandal had arisen in the district of Saharanpore, adjoining the Doon, and, next to the Doon, the most northerly part of the N.-W. P., and of the tract bounded by the Jumna and Ganges. Two great irrigation works were in hand, and the Collector had also much employment for labour in his own district works. In order to mitigate the pressure on the peasantry thus caused, and to see fair-play in the supply of hands, he had instituted a sort of corvée-system, illegal, perhaps, but inspired by a wise humanity. And in like manner he had arranged for the supply of carriage, whether for materials or for the march of troops. Sub-Collectors were compelled to prepare lists of villages showing the resources of each, and to take the utmost care that the demands of public officers, for labour or for carriage, were met

* *Russell Colvin*, in "Rulers" Series, Oxford, 1894.

fairly to each village and in due proportion. In these things the Collector was only bent upon introducing just and humane methods into what was elsewhere carried on in corruption and oppression. But, unhappily, he was a man of strong character and acute intellect: and he made enemies among the native officials, who found their means of peculation observed and checked in a way that seriously reduced their illicit profits. In such cases an atmosphere of calumny soon closes about the superior man's good name; and all the more readily if his superiority be frank and outspoken. Mr. C., having made enemies around him, was denounced to the local Government: Colvin, with the zeal of a new position, ordered an enquiry; and when C. not only admitted, but attempted to justify, his alleged abuse of authority, he was transferred to another charge, the adjoining district of Muzafarnagar. Here, I suppose, he worried the Government with over-earnest protestations; the end was that he was suspended from employment, and my humble and relatively unpractised self appointed to officiate as Magistrate and Collector of the district. This was great promotion for a young officer who had been only five years at work; and I knew, of course, that it could be only for a short time. Still, so long as it lasted, it was an interesting and useful lesson, though by no means light or easy. My European staff consisted solely of a young civilian who had just joined, knowing little of law, nothing of the vernacular, and not much of aught else; a brave and excellent young man, whose legal jurisdiction extended only to a fine of 50 Rupees. Necessarily the whole control of the district fell on me, and I had to labour, literally, day and night. At the end of about six weeks, a senior, of due standing and experience, arrived to take charge, and I fell back on the more appropriate post of "Joint."

During my brief charge of the district I had the privilege of attending the opening of the Ganges Canal at Rurki, in March, 1854. It was a lovely spring morning; the mountains looked down with their immemorial crest of ice glittering in the sunrise; a dense crowd filled the surrounding plain, over which leapt the light arches of the Solâni aqueduct, lined with scarlet-coated sepoys; and, as the Lieutenant-Governor lifted the bar that opens the sluice gate, the troops fired a *feu-de-joie*, and the European spectators raised "a cheer for Colonel Cautley," the Engineer-in-Chief, as, with folded arms and bent head, he silently watched the inrush of the waters that were to save a million fields from famine so long as the British rule in India should last. I had already provided for the transmission of a message by posting mounted policemen between Rurki and Meerut—then the nearest telegraph office. No hitch occurred;

the messengers galloped as they were bid. In the evening all the Europeans present sate down to dinner in a large tent, erected for the purpose; the Lieutenant-Governor rose to address us; and, ere he had done speaking, the answer of Lord Dalhousie from Calcutta was put into his hand:—"I have received your message: all honour to Colonel Cautley!" As I rode slowly home by moonlight, an open carriage caught me up, in which was seated Sir Henry Lawrence, who had come up from his post in Rajputana to witness the ceremony. He offered me a seat, and one of his grooms led my horse, while I shared the carriage with that good and great man, whom I was never to see again.

By this time the change of the old order was ripening fast; evil omens rose; the demeanour of the native troops showed ill-will and ill-discipline; sensitive persons began to take vague counsel for the future; the rest of Anglo-Indian Society going carelessly on, "as in the days of Noe." Life in a small sequestered district was almost uneventful. In the hot weather you were left to yourself in your own share of the work; the Chief commonly assigning to his Joint almost uncontrolled jurisdiction over at least half the district; when there was an Assistant, he took the Treasury and other business not requiring much initiative: a native Deputy did some of the less responsible duty, criminal and fiscal. If you fell sick, you could not get medical advice, or change of air, except by being carried in a litter across a country without carriage-roads, which, in health, you crossed on horse-back. If your family was on the hills, you might spend months without hearing a lady's voice or speaking your native language. When the rains were over and the power of the sun began to decrease, the chief went off to his own special subdivision, and the Joint to his, abundant camp-equipage being maintained for each. The duties involved were pleasant and interesting. Camp was pitched in some grove of ancient mango-trees, not far from the village well. In the early morning one mounted one's horse, usually a hardy country-bred with a little jumping in him; the greyhounds followed, and the groom, perhaps, carried your gun. Thus equipped, the European officer rode over the fields, now coursing a hare, now firing at an antelope, laying out a line of road, or inspecting the crops and fallows: a gallop home over walls and ditches bringing him to bath and breakfast. All day he administered justice in the open air, or listened to the complaints of litigious landholders, tempered by the presence of neighbours restrictive of too much misrepresentation: at sunset a stroll through the village streets, an inspection of school or police office, and the short day was gone.

At the beginning of 1856, my chief, Mr. Robert Thornhill,

was sent to Futtehgurh as District Judge, and I was once more put in charge of the post, not altogether without hope of a long incumbency. Mrs. Thornhill was a grand-daughter of the great Mrs. Siddons and had in a marked degree the Kemble good looks. She was murdered, the following year, with her husband and child. I had been marching in the northern tract bordering on the district of Saharanpore, where my old chief, Mr. Ross, was now Collector. One morning the post-bag proved to contain the following letter from Mr. Muir, Secretary to Government :—

"Mr. Colvin is sorry to be unable to leave you in charge of the M. District, as it has been applied for by B., who is seven years your senior. He would be glad to know if you would like to go to the Doon, *pending further promotion.*"

The words that I have underlined made all the difference : under Ross's advice I accepted the offer, with whatever misgivings. There would be no increase of pay ; there would, on the other hand, be considerable increase of expense ; instead of a subordinate position in a place where one need neither dress nor entertain and could live Robinson Crusoe, one would now have to keep up two establishments and head society in the largest European community north of Calcutta. Nevertheless, as it seemed to my wife and self and to our kind neighbour, the refusal of so flattering an offer would have been both ungracious and imprudent ; while the final clause appeared to signify that, after a not too long interval, more lucrative advancement would be forthcoming. So reasoning, we sent a grateful acceptance ; and, before the hot weather set in, I was back in the Doon as Chief I took a small house at Mussoorie for my now increasing family, neither mother nor children being strong enough to dispense with a hill-climate for the summer. For myself I had a *pied-à-terre* near my office at Dehra, arranging for an occasional exchange with the Assistant when I took a run up hill. The life at first resembled that which one had led as Assistant Superintendent a few years before ; only that the interest and responsibility were greater. I planted the road from Dehra to the foot of the hills with trees, and organised district communications, which were in a very backward state : before I left, a complete system of roads had been introduced into the western side of the valley, where the tea plantations were, and many of the streams were crossed, for the first time, by serviceable bridges ; in the town of Dehra a Municipal Council was established, and the streets were paved and drained. But I must not anticipate.

The years to which this chapter is devoted were years of change and movement in Upper India. The *Calcutta Review*, originated by the late Sir John Kaye, had called out the

abilities of Henry Lawrence, Arthur Broome, and others of local celebrity; and the problems of Indian life and administration received an attention which they had not attracted before, unless in rare books like those of Shore and Sleeman.

*The Friend of India*, a weekly paper set on foot by the late J. C. Marshman, was published at Serampore, an old missionary station on the bank of the Hooghly, opposite Barrackpore; and this paper long maintained a somewhat unique character: M. being succeeded in the editorial chair by Meredith Townsend, afterwards well-known in London as co-editor of *The Spectator*. The basis of *The Friend* was a firm belief in the Gospel, and in the work which the first Editor's Rev. father had helped to start at Serampore in Lord Minto's time. To this was added a warm admiration for the then Governor-General, Lord Dalhousie, and a conviction that, under such a Chief, the blessings of civilisation would be spread over the land. It would be harsh to say that the work was to be done without regard to principles of ordinary morality, *per fas et nefas*; but it did strike some of the less convinced observers that the crusader-spirit sometimes carried these Indian doctrinaires too far; and that it was more than difficult to discern the finger of Providence in some of the high-handed measures of the day—however well-meant they might be. In the interior of the country—"the Mofussil," as we used to call it—literature did not altogether languish. So far back as Lord Auckland's time a periodical had run a two years' course, under the title of "Meerut Universal Magazine," which had, in its place and day, a great reputation. The Editor was Captain Harvey Tuckett, of the 11th Hussars, whose duel with Lord Cardigan led to the trial of that pugnacious peer in 1840.* Tuckett was assisted by much local talent, including H. Torrens, of whom mention has been already made, and Elliot, afterwards known as Sir H. M. Elliot, K.C.B., Dalhousie's Foreign Secretary, and author of the great work on Indian History in eight volumes, which must always be a guide to English students. The M.U.M., as it was affectionately called, waged war against Calcutta and all its ways; but the movements of the public service dispersed its contributors; it came to an end in 1837; and copies are now so scarce that—with the exception of one in the India office—I know of none existing.

* The story does not belong to my subject; but it is curious to think of such things happening since the accession of our present sovereign. The quarrel arose out of letters in which Tuckett criticised his Colonel's conduct in a newspaper. The combatants fought on Wimbledon Common, and T. was severely wounded. Cardigan was acquitted, on a flaw purposely introduced in the indictment, by a Court consisting of the entire House of Lords. (16th February 1841.)

The M. U. M. made two thick volumes; I possessed a copy, but found it too bulky to carry about, and sold it to John Lang, of the *Mofussilite*, a remarkable Indian man-of-letters, who was collecting a library at Meerut. Lang was, I believe, of Australian origin; but he had been educated at Cambridge and called to the English Bar, where he was a contemporary and associate of Tom Taylor, Alfred Bate Richards, and my friend, Henry Sherer. Dissatisfied with London openings, he came out to India when Hardinge was Governor-General, married a Miss Peterson, and tried his fortune at the bar of the Calcutta Courts. Not succeeding at once, he accepted an engagement as Editor of a new journal to be founded at Meerut, under the title of "The Mofussilite"; and by the time under notice was an established journalist and social celebrity in all the Upper Province. His paper enjoyed the distinction of producing the most laconic leading article on record; it appeared in 1850, when England was in one of her periodic flurries about a West-of-England clergyman, named Gorham, whom Bishop Philpotts, of Exeter, refused to induct into his living, on the allegation of unsound doctrine. The matter was heard in the Queen's Bench, and carried thence into the Privy Council, where the Archbishop of Canterbury expressed himself in favour of Mr. Gorham; the Bishop of Exeter excommunicated his Primate, and all England rang with the controversy. It was during this excitement that Lang was, one morning, called upon to write a "leader" on the prevailing topic. He was of convivial habits, and his matutinal head-ache often led to short paragraphs and most unblushing excuses: on this occasion he was thought to have out-done himself. The entire article consisted of these words:—

"THE GORHAM CASE.
"D——n the Gorham case."

Readers were convulsed.

There is little admirable in the incident; but it is perhaps worth recording, if only as a sample of the liberty allowed to a general favourite by the Anglo-Indian public, and the ease with which that public was amused.

The first up-country journal was not the *Mofussilite*; a clever Irishman had established a short-lived paper called *The Agra Akhbar*, and, after its demise, another paper had arisen in its place, called *The Agra Messenger*, in connection with the *Delhi Gazette*, which latter lingered into comparatively recent days: a comic "*Weekly*" also appeared at Delhi, at such fitful intervals as were permitted by the supply of matter supposed to be amusing. The conductors of these journals were all known to me in 1856, and I was not guiltless of contribution to their columns.

The managing proprietor of the Delhi Press was Francis Place, son of that once famous radical tailor in whose back-shop the Benthamites hatched the *Westminster Review*. P. was a somewhat unworthy representative of his sire, being, indeed, a very chief among the Philistines; but let that pass! At the time when I served in the Delhi territory, he was in England, his work being carried on by a genial colossus, named John O'Brien Saunders, whose son, I believe, still manages the leading Calcutta Journal.

We persuaded this gentleman to start a monthly periodical at Delhi, in humble imitation of the *Bentleys*, *Blackwoods*, etc., of those days. When poor Place heard of the enterprise, he said sadly:—"Yes, it is *Saunders' Magazine*, I see; but, alas! it is Place's money." At the same time my gifted friend, Sherer, opened fire at Agra with an opposition serial, which even his graceful wit was unable to redeem from premature decay. The Delhi wags produced the following epigram on *Ledlie's Miscellany*, as the Agra Magazine was entitled:—

"My first is the heaviest metal known,
My second is not true:
My whole is a 'Miscellany'
Compounded of the two."

Among other of our contemporaries was a Punjab organ known as the *Lahore Chronicle*, conducted by a semi-educated man of the name of Cope, who had come out to India as a private soldier. In 1854, this man, who had been Secretary to the local Committee of the Paris Exhibition, was found to have detained a case of jewellery entrusted to him for transmission. The goldsmiths were disappointed and very angry; public feeling was roused, and C. was threatened with criminal proceedings. He used his paper to appease outraged morality, and those whom he had formerly annoyed and offended by unmannerly criticism, availed themselves of the opportunity to be revenged. Thus, on C. publishing a lamentable protest against premature condemnation, a contemporary produced these lines:—

"Alas! poor C—e; and so you say
Your enemies are cruel;
While they declare you seek fair play
Because it is a jewel."

And when he urged that the apparent breach of trust was only due to a fatal habit of putting things off, another wrote:—"We have often heard that procrastination is the thief of time, but never knew before that it could be the thief of diamonds."

Such was the sort of thing that, by a friendly convention between writers and readers, passed for wit in the Hindustan

of Dalhousie's days. The obligatory humour of the "Punch" was even less diverting; it was conducted by Mr. George Wagentreiber, who had a certain untrained skill in caricature; and the "Comic" periodical was adorned with drawings reproduced in crude and primitive lithography.

Literary work of a higher order and addressed to a larger public was also within the bounds of reasonable expectation. It has been mentioned, in Chapter I of this Memoir, that Empson had praised some verses that I had produced in the *Haileybury Observer*. It was only that thin pale flame that so often appears in youth; the work of what Sainte Beuve has called:—

"Le poete, mort jeune, à qui l'homme survit."

Nevertheless, some of the work sent home in 1853 had been shown to Dr. Moir* ("Delta"), who was a literary oracle of that day in Edinburgh; and for some time contributions which passed for poetry used to appear in *Blackwood's Magazine*. These were finally collected and published in a volume, entitled *Ex Eremo*, which met with quite as much favour as it deserved. It was full of genuine feeling—so much I can honestly say—and bore a motto from Ovid's *Tristia*. But I cannot claim more; and I only mention the matter now, that I may illustrate and enforce the lesson that inspiration is not genius; and that a young man cannot do better than use any latent fires of which he may feel conscious for the heating of the furnace of duty, or even for the boiling of porridge.

My friend, Sherer, gave me some lines when we were at Muttra together, which well expressed the uses of life as affected by a breath of art: I recollect the opening well:—

"Ears where the music of the brook flowed in,
Are listening daily to the tales of sin;
Eyes that once lingered on a green tree's grace,
Peruse with pain the criminal's hard face;
Fingers that wandered as the fancy told,
Draft off the dull biography of gold . . . etc."

Horace has expressed, with his unsurpassable neatness, the difficulty of attaining distinction, as also the comparative worthlessness of such success:—

"Principibus placuisse viris non ultima laus est:
Nec cuivis hominum contingit adire Corinthum."

I think that I realised this truth in my own mind, and that

* David Macbeth Moir, a physician of Musselburgh (1798—1852), an amiable poet and humourist, whose collected poems were edited by Thos. Aird; and who also left a novel of Scottish Life, *Mansie Wauch*—which is still alive, if not widely popular. I did not know him personally.

I derived from it a certain kind of content. The lines have been thus paraphrased :—

"To reach the City of the shining hill
Defeats nine pilgrims out of every ten :
Yet needs no succour but a strenuous will,
And favouring guidance of successful men."

## CHAPTER IV.

### 1856—1860.

About this time died a lady whom I had known in Calcutta, and who formed one of those relics of the past that one is so sorry to lose. Mrs. Ellerton had not been a native of India ; but she had come out so young, that she remembered Calcutta when it was no more than the chief mercantile station, or "*Factory*," of a trading community, such as Hong-Kong has since become. One of the incidents of those days that she was always ready to relate, was the duel between Warren Hastings and Francis in 1780, which led to such important results Dr. Busteed, in his pleasant *Echoes of Old Calcutta*, has gone. minutely into all the circumstances of that memorable morning (August 17th) when the two distinguished antagonists met in a lane at Alipore, each hoping to deliver himself of further opposition. It was an encounter of the Governor-General's own seeking, when the animosity of the Member of Council had rendered the situation intolerable ; and it is on record that Hastings objected to the spot first selected on the score of its being *too dark*. What the precise meaning of this may have been, is matter for conjecture ; whether Hastings wanted more light to make sure of killing his man, or, as one would rather hope, to make sure of wounding him in a *non-mortal* manner. The latter, at all events, was the result ; and Mrs. E. used to relate that she was riding with her father, that morning, towards Alipore, when they met a litter in which lay a form covered with a blood-stained sheet, and were informed by the bearers that they were carrying "Francis Sáhib, who had been shot by the Lord Sáhib."

Mrs. Ellerton must thus have had memories of Calcutta extending over three-quarters of a century at the time of her decease. She passed the concluding years of her life as an inmate of the Bishop's Palace ; and the Bishop was Daniel Wilson, who did not long survive her, whose name at once recalls to all who knew the India of those days, a flood of mingled memories. Like most remarkable men, the good Prelate combined qualities that might have been thought almost incompatible ; and he became unwittingly the father of a large family of anecdotes, which grew to be the common stock of Anglo-Indians. One of the first things that a new-comer used

to hear in those days was, that of the sermon on "Brotherly Love;" how the Bishop, preaching in the "New Cathedral," with his Chaplain—afterwards Archdeacon of the diocese—in the reading-desk below, pointed his discourse with a personal application. "Brotherly Love, my brethren, is the rarest of all virtues. Now here is my domestic Chaplain, the Rev. Mr. P., in whom I might have been naturally led to expect it: Well! he sold me a horse for two hundred rupees last week, which I have since found out not to be worth twenty." The Bishop was, indeed, famous for these unexpected flashes. Once, as he was visiting his extensive diocese, he came to Allahabad, and preached on the Sunday in the Old Church in the Civil Lines, where the pulpit occupied a central place at the intersection of the choir, nave and transepts; the front of the last-named being occupied by the ladies and gentlemen who kindly volunteered to act as choir. The worthy Diocesan took "Praise" for the subject of his discourse, delivered extemporaneously, as his custom was. "I would have you to know," he said, "that Praise is as much a duty of Divine Service as Prayer. You might take example by the wife of your Brigade-Major, whom I have observed prominent this morning in conducting your psalmody." . . . Here ensued a momentary pause, during which the preacher saw, or thought he saw, a certain bridling on the lady's part, as who should say, "His Lordship refers to me!" Without movement or change of voice, the Bishop proceeded to check any tendency to vain-gloriousness by the cool corollary:—"To be sure, her singing was not remarkable; but, like Mary Magdalene, she hath done what she could."

Stories of this kind could be almost indefinitely multiplied by any survivor of those days who cared to take the trouble. One or two others occur to memory that may be less familiar, though they rest on good evidence, having been related by Bishop Wilson's successor, Dr. Cotton, mentioned in the 1st Chapter of this Memoir. "My predecessor in this See," so Bishop Cotton would relate in his dry manner, "was very hospitable; but he had a habit of introducing his guests' names into his family devotions, which was apt to be more *piquant* than agreeable. Thus, when Dr. MacDougall came to Calcutta to be consecrated to the See of Labuan, he was invited to be an inmate of the Palace, and exerted himself the first day so as to amuse the dinner-table. When the time for retiring for the night approached, the household knelt round the head in family prayer, and in the course of it the Bishop prayed for his guest as 'our young friend who has come among us to take upon him the office and ministry of an Apostle. Vouchsafe, O Lord!' he added, 'to watch over him; make him less frivolous, and less prone to giggle upon trifling provocation." "On another

occasion it was a less dignified visitor who was made a victim. A young clerical servant of the Company, newly arrived from home, was a guest at the Palace, awaiting orders, and instant with the domestic Chaplain to get him a good station. The importunity reached the Bishop in due course, but for some days produced no response. At last, one evening, the decision was thus strangely imparted: "Behold, O Lord! thy servants assembled under this roof, especially the Rev. Mr.————. Cast over him Thy protection, seeing that he leaves us to-morrow morning for the remote and insalubrious station of————", naming one of the "Penal settlements" of the service.

It is not to be understood that, unless in the French sense, the Bishop had any "malice" in his composition. The record of his life (by Rev. Josiah Bateman, 2 vols., London, 1860,) shows a man both benevolent and profoundly earnest. But all men have their weaknesses; and his was this sort of sly humour, and a sympathy that showed itself in odd "pokings of fun." In his last days, which were now drawing to a close, the labour of visitation became too heavy, and some of his work was taken by the then Bishop of Madras, a divine unhappily afflicted with a total loss of aspirate, who visited Dehra in 1856 and consecrated the Church. In the course of his address on this occasion, he spoke of the sacred edifice as "an 'Ouse which would be an 'Ospital for sick 'Earts"; and in the course of the afternoon a sketch of the Rt. Rev. preacher appeared with the following epigraph:—

"Ye in this House who seek relief
—which D—ltry did miscall so—
Had best not only bring your grief,
But all your achës also."

This sort of frivolity gets you into Mrs. Grundy's black books; and no wonder. As Superintendent of the Doon, one was a prominent member of the largest white population north of Calcutta; consulted by grass-widows in their afflictions; President of Club Committees; expected to be present at meetings and balls, to take part in the management of the Theatre, and to read the lessons in Church. A lack of dignity was sure to be imputed to one who could not take such occupations seriously; and to be the proprietor of a comic album, and the accredited originator of personal gibes, was not the best way to command the respect of a jealous and somewhat narrow-minded community. It was not only the immediate subjects of these little innocent pleasantries who might be offended; but the whole society around one, perhaps, conceived an unreasoning resentment. Anglo-Indian society, in those days, was not given to indulgent views: sent into exile at an early age, before the traditions of the nursery had been modified by the

better influences of education, or by intercourse with cultured minds, the "cadets" and "writers" carried the moods of schoolboys into the work of men. Their womankind were unable to correct them: the whole machinery of life was rude; reflection was unregulated or unknown; the Articles of War were held to include the Articles of Religion; coarse acts and words accompanied intolerant orthodoxy, and a man who joked on a clergyman was apt to be sent to H——for a d——d atheist.

A man in many respects superior to this class would not rise above its general level by the mere possession of better manners. Such were often set in the higher places of the Government; men whom ambition and mental energy had brought out of the mass, although the very concentration of their faculties on the path of professional success prevented them from seeing anything else. Such a man was now—unhappily for me—rising to local power; an able administrator, a capable student even, but one whose rule in all things was the acceptance of whatever was established by authority; and whose determination to attain his ends was not always compatible with a scrupulous examination of means. It used to be said of this official that he would get what he wanted "by hook or by crook—and by crook for choice." His feeling towards myself was probably one of distrust, rather than dislike: we were always rather intimate; but, from the time of which I write, he began to exert a sinister influence on my fortunes, actuated by an idea which he once expressed by telling me that I "seemed to look on everything as an open question."

Pleasant it was, in those days of nascent dissatisfaction, to break away from Clubs, grass-widows, and religious controversies, and to pass days of interesting work on the wide mountain sides. A tract of nearly five hundred square miles rose at the N.-W. angle of the Doon, with scarcely a single level field upon its surface. Though there were 495 townships in the sub-division, the population was sparse and simple, and the cultivation, scattered about in little terraces, was small in extent and very backward. In this remote and primitive region I was now directed to make preparations for a "settlement" of the land-revenue, amounting perhaps to a couple of thousand pounds a year. As the fields were not much more than window-gardens on a large scale, and the higher points were of arduous access, a good deal of difficulty attended the carriage and use of instruments for a cadastral survey. Yet such an operation was evidently much needed if the people were to be given the benefits of an accurate determination of their obligations to the State.

In the centre of this wild tract the hills rose to a peak called

Deobun, 9,347 feet above sea-level, at the foot of which in later years has been established the military station of Chakrata, in my days a mere encamping-ground. Deobun was to be reached only by a steep and narrow path; but, when once the summit was attained, a fairer scene could hardly be, but for the want of water. The mountain was crowned by forests of fir and ilex, and carpeted with potentilla and wild-strawberry. The northern horizon was formed of the Oberland of the Southern Himalaya, stretching from Bhadrinath to the westward above Simla, a range of sparkling snow-peaks, 100 miles long, and averaging 20,000 feet in height. On the sides of this delectable mountain the deer browsed, and the Impeyan pheasant—known commonly under the vernacular name of *Manāl*—was at that period abundant. This bird is about the size of a young turkey; and it was a brave sight to see when he shot whistling down the wooded slopes, glistening in the morning sun like a fragment of the rainbow.

On this beautiful spot I was instructed to build a house, to serve primarily as an official residence for public officers on tour in Jaunsār, as the sub division was called. It was a simple cottage, strongly constructed out of the adjacent rock, by the rude skill of the mountaineers; with a kitchen as a lean-to, and a range of servants' rooms and stabling on a lower ledge. This remote hermitage was my summer retreat for some years to come; and, after the settlement was over, it was transferred to the Forest Department, by whose officers it is probably still occupied.

The cold season was devoted to making similar preparations in the Doon, as also to general administration and road-making; but everything was obstructed by a violent outbreak of epidemic cholera, from which great mortality ensued; two of my servants, for example, dying in one day. Early in the spring of 1857, work was resumed in Jaunsār, soon to be interrupted by a still more terrible scourge. I was not personally unprepared for some political trouble in that year; and, in the previous September, an article of mine in the *Calcutta Review* had ended with words in which I had vaguely, yet with much conviction, predicted the approach of a convulsion.* But it was with no definite expectation of the actual events immediately impending that I set forth to initiate my difficult hill-survey. I was to employ instruments only for the boundaries of estates; nevertheless, as above noted, the work of carrying

* "A day may come when . . . the utmost address will be required to conciliate native society and preserve the fidelity of the army." Then followed a parallel with the state of France just before the Revolution, "a Paper-Age of hope, doctrine, and retrenchment," followed by a volcanic upheaval.

about and using plane-tables, flags and chains, down precipices and up steep mountain-paths, was not easy; and my hands were from the plains and by no means practised mountaineers. But the climate was a great compensation for a young Englishman whose knowledge of India had been chiefly derived from such places as Muttra, Hissar, and Muzafarnagar; and one gladly roamed about the wild hill-side, where the breeze blew from the snows, and the bee hummed in the dog rose-bushes; and a noonday repast and rest were to be had on the bank of a stream whose rapid water had yielded a refreshing bath.

My family were stationary at Deobun, which, I hoped, was too high to be reached by the infection of the epidemic: but when I arrived, I found that I was mistaken: cholera was raging, and my first duty was to visit, and so far as might be possible, relieve, the surrounding villages. It was impossible to do much for sanitation; unaccustomed to epidemics, the people had never thought of living otherwise than in the slovenly manner that had satisfied their fathers, and trusting to the natural slope of their accentuated sites for the drainage of their abodes when rain fell. Now, the cholera had come upon them in the long dry season of an Indian winter and spring; and their only resource had been in change of air. The villages were deserted; the inhabitants, whenever infection appeared, took their children and their gods, their flocks and their herds, lived as they might, and slept under the starlight on the bare mountains, where the air was cold and pure from contamination. This measure of untaught hygiene was found effective; but wherever apathy or a stronger motive kept them at home, the people suffered most severely. One morning I walked down from the top of Deobun, to visit a place about 1,000 feet below, whence the supplies for my camp used to be derived, and now reported to be attacked. I took with me an orderly, carrying medicines: on the way we faced a sick villager, lying helpless, over whom we wrapped a blanket, but found him too ill to swallow drugs. On reaching the village, we were encountered by the head-man, who said that nearly all had left, but he was detained by the duty of providing us with flour and milk. His daughter was ill, as were all the remaining inhabitants; in one house we saw an old couple lying dead on the floor; to cut a long story short, all perished that day—headman, daughter, and every soul besides; and, on our way back to the bungalow, we found the body of the man whom we had cared for in the morning. I believe that such visitations are most rare on these breezy summits, where people from the plains so seldom find their way to carry infection.

And now a still greater terror was at hand. In the beginning of April we had two visitors at Deobun, R. Wallace-Dunlop, of

the Civil Service, and Captain Speke, going up to shoot in the Alpine region, about the Niti Pass. Though unconscious of the exact future, both were prescient of coming trouble: they were on sick leave, but talked of returning to the plains if the situation grew worse.* We passed the evening round the wood-fire, talking over the alarming omens which, from Barrackpore to Umballa, were perplexing men's minds with fear of change, though not even then realising the full and obstinate nature of the coming trouble.

The actual explosion was soon to enlighten us with lurid splendour. On the morning of my thirty-second birthday I was sitting with my wife under the trees in front of our cottage, when the post-runner put his bag into our hands. In our retired life this was a welcome excitement; I tossed the newspapers and private letters to my partner while I turned to the business-communications. The first thing on which my eyes fell was a small note from Mr. James Robertson, my Assistant, hastily folded and containing only a few lines to the following effect: "Mutiny at Meerut; jail broken: cantonments burned: so-and-so killed." It became necessary to return to the head-quarters of the district, and the day was devoted to preparing for the march. By night little progress had been made; owing to the cholera hardly any porters could be obtained, and we had to go to bed with the prospect of separation in the morning, when I must walk the 40 miles to Mussoorie and leave the family to follow when I could collect carriage for them. In those wild pathways everything went by human transport, the tents and the beds, the chairs, tables and cooking-pots, the children themselves in their jhampans, or portable seats, resembling the *Sedia gestatoria* in which the Pope is borne into S. Peter's.

But when things are at the worst, they must obey the law of mutability. Before I could start in the morning, men began to arrive; and, by leaving our heavier property in the bungalow—where it was all subsequently plundered—,we were enabled to set out. On reaching the suspension bridge by which the old road was carried over the Jumna, we found a tent pitched; and my wife busied herself with preparing afternoon-tea while I went to the river to bathe. What was my horror to find, when I had made my plunge, that it was impossible to find the way out of the water! When I had bathed there, on my way out in March, the river had been low; but now it was swollen by the melting of the snows above, and the landing-place had disappeared: a hundred yards below was a cataract. Never can I forget the horror of that moment: to be carried down the rapids and dashed to pieces within a few feet of one's wife and children, was bad

* As, indeed, they did; Dunlop to distinguish himself by service in the Meerut District, and Speke to die a soldier's death in the storm of Delhi.

enough ; but I thought more of the world's malice, and how every one (but a few faithful friends) would cry, Out upon the coward who drowned himself to escape a dangerous and responsible duty! Nerved by the thought to fresh exertion, I at last clambered up the scarped rock on which the bridge rested, and fell senseless on the shore. Next day we mounted the steep slope of Badraj, and encountered on the exposed summit one of the most tremendous tempests I ever saw or felt, which drove us into the welcome shelter of a hut which some sportsman had built in a nook and furnished with a stock of firewood and a chimney, where we found shelter from storm and black darkness. Next morning was fine, and we made our way into Mussoorie without further trouble, except meeting a friend who lived out at the edge of the station and gave us the somewhat discouraging intelligence that the sappers at Rurki had murdered their commandant, and that the Gurkhas at Dehra had followed their example.

For Dehra, nevertheless, I was bound ; and, after bestowing the family in a temporary asylum at Mussoorie, I pushed on. When I reached Dehra that evening, I put up at the mess-house and sent for the Subadar-Major who had been left in charge of the lines. Things turned out better than I had heard ; the sappers—or a great part of them—had, indeed, mutinied and murdered their officer, but the Sirmoor Battalion had arrived safe and sound at Rurki, and all was quiet at Dehra. I accordingly dismissed the native officer, with instructions to make his morning and evening reports to me, and called a meeting of the Christian inhabitants of Dehra, where provision was made for the maintenance of order in the town. For the district at large other measures followed, as suggested by its peculiar conditions. Lying between the two ranges of hill, the sub-Himalaya to the north and the Siwalik to the south, it is bounded on the west by the Jumna, on the east by the Ganges ; the area is 1,193 square miles, and the population, at the time of the Mutiny, was under 100,000 souls, of whom three-fourths were Hindus : the head-quarters of the Grand Trigonometric Survey and other offices were there, and the American Presbyterians had lately established a Mission ; altogether—including retired officers—there was a considerable white population, but of this a great number had gone to the hill-sanitaria of Mussoorie and Landour. These places, it must be understood, are six or seven miles up the hill, the last named being the military cantonment, containing accommodation for convalescent European soldiers from the neighbouring garrisons. Of these, there were about one hundred present at the time of the Mutiny, under the command of an Irish Colonel who had risen from the ranks. Taken together, the united

mountain town, scattered over a wide extent of cliff and terrace, some 7,500 feet above sea-level, consisted of detached bungalows, schools, and convents, with a club-house, hospitals, barracks and churches, and, at the time of which I speak, was crowded with the families of officers, fugitives from the heat and from the terrors of the rebellion. They depended for food upon supplies brought from below ; no private banks at that time provided for their financial accommodation ; but the Government had a treasury at Dehra, which was under my charge.

The problem thus presented was two-fold. The little district, with its inhabitants, was virtually isolated : on the north were the native states of the sub-Himalaya, on the west the principality of Nahan, on the east the Province of Rohilkund, entirely occupied by mutineers and rebels, on the south Saharanpore, still staunchly held by my old friend Spankie, but so disturbed that the roads were closed to traffic. And the Doon was so far from being self-supporting, that there was neither treasure nor food for one month's consumption. This was the most pressing difficulty ; but the protection of life and property, and the preservation of the Asiatic public from the infection of revolt, made one of hardly less importance.

The Subadar-Major was, for the time, a person of much moment, and his attitude seemed not entirely satisfactory. The Sirmoor Battalion was composed of Gurkhas, and it may now be a fair presumption that they had not been tampered with by the founders of the revolt, but of this we had, at the time, no knowledge. What they would do, was naturally a question of great anxiety, because the little depôt left in the lines would be sure to follow their example. We had heard that the corps had mutinied ; the news appeared to be, at least, premature, but might be hereafter verified : in the meanwhile the Subadar adopted an expectant attitude. A second native, on whom much would evidently depend, was the Tahsildar, or Sub-Collector, who was the immediate agent and representative of authority for the native community. If the eighty sepoys of the Sirmoor Battalion were held together, and if the Tahsildar proved fairly faithful and energetic, there was no reason why the people of the Doon should not be kept from crime. A third Asiatic who might exercise influence, one way or the other, was Raja Lal Singh, a State prisoner, who lived in his own house under my charge, and was permitted to maintain a small personal guard, or following, of armed retainers. This nobleman had been Prime Minister of the Punjab in 1845, and after the first war was a member of the Council of Regency. In 1846, when Henry Lawrence went up to Cashmere for the purpose of making over the country to the Raja of Jummoo, a despatch

was found in possession of the provincial Governor ordering him to resist ; and this order bore the seal and signature of Lal Singh. A Commission sate under Lord Hardinge's order, and Lal Singh was found guilty and deported to India. He was at first imprisoned in the fort of Agra ; but he found fault with the climate, and after the annexation, was allowed to live at Dehra. He was a handsome, well-mannered man, completely illiterate and not very brave ; but not at all disposed, as I soon discovered, to sympathise with the revolted sepoys and their friends.

I proceeded to make use of these native associates. The Gurkhali Subadar—his name was Bunya Khatri—did not at first seem very happy ; but he obeyed my order to report twice a day. The Tahsildar was sent out to sound the villagers and see what could be done to protect the passes against sudden attack. The Raja was encouraged to augment his guard. Ere long we had blocked all but the main roads in the Doon, and raised a militia for their observation among the Zemindars. In the town itself a number of posts were established, and a patrol of Christians was appointed, who served by roster, visiting the guards in parties of two at various and uncertain hours of the day and night. Colonel—afterwards Sir Andrew Waugh—an officer of engineers, who was chief of the Trigonometric Survey, organised a small force of volunteers for the protection of Mussoorie, and Colonel L'Estrange took such measures as seemed best at Landour. So the month of June opened on a state of things painful, but not desperate. On the 1st of that month, the Sirmoor Battalion joined General Wilson's victorious column on the march to Delhi, and a few days later brought us a runner bearing a bag full of letters for the men of my little garrison in the lines. The knowledge that the corps had cast in its lot with the Government gave confidence to both sides; and from that day forth I had the most respectful and willing help from Bunya Khatri. A few days later I received a note from my old school-fellow, Forsyth, afterwards made K. C. S. I., for various diplomatic services, in which he informed me that 400 infantry and 200 cavalry of the Jalandhar Brigade had passed through the Cis-Sutlej, and were marching towards my western border : his messenger had out-run them ; but it was clear that he (F.) was not strong enough to attack such a formidable body, and we might look to be immediately invaded. It must have been about the middle of the month ; the monsoon had not yet reached us, and the heat was terrible ; but, after consulting with Bunya Khatri, I resolved on going out to attack the mutineers, and, if possible, prevent them from bringing fire and sword into Dehra. The treasure was despatched to Landour, whence help came in the shape of some convalescent European soldiers and a few volunteers. Mounting the men on

ponies, and directing Khatri to bring up all the Goorkhas he could spare in support, I marched for the Western Doon with a few friends on horseback, but leaving Lál Singh in bed, prostrated—as he declared—by fever and ague. But the unavoidable delay which had occurred in our preparations prevented our overtaking the enemy. Bent upon joining the defence of Delhi, and prompted by my *zemindars*—who had no desire to keep such unprofitable visitors—the sepoys ran across the S.-W. angle of the valley and through the Timli Pass. By the time we reached Bádsháhágh, they were already far away ; and, as we had no provisions and were already many miles beyond our own limits, we had nothing for it but to return. Nevertheless, the little expedition had not been all in vain : it had accelerated the movements of a large and dangerous hostile force, and had shown the people of the Doon that we were ready to defend ourselves and them.*

What caused, ultimately, our most serious trouble, was the prosaic matter of supply. Food was failing and would soon not be procurable for money ; while money itself was growing scarce. It has been already shown that many European families had taken refuge in Mussoorie ; the heads of these families being on the plains, many of them engaged in the siege of Delhi, or with various field-forces. These gentlemen, when they drew their pay, sent a large portion of it to their wives, as often as the state of the roads allowed, in drafts upon my treasury. As time and the war went on, sick and wounded officers came up in person, some of whom could not get pay at all, and were obliged to come to me for advances. My stock of coin became rapidly depleted, depending as it did upon remittances which had become precarious and rare. I was not, for some months, in communication with the Accountant-General of the Province, who was shut up in the Fort at Agra, in the heart of a hostile country. Official bankruptcy and general disaster were clearly among early possibilities ; and the only resource appeared to lie in the hazardous experiment of a paper currency, bearing interest, but for the time at least, inconvertible. It was a grave responsibility, but one without apparent alternative. Public confidence had not been entirely destroyed in the Doon, however shaken ; Spankie still held out at Saharanpore ; life, moreover, had to go on, somehow. So I got my notes printed, and stamped them with a crest-press, as a precaution against

* To avoid unnecessary egotism, I would refer for all details to Malleson's continuation of Kaye's *Indian Mutiny*, where will be found a detailed account of what was done to preserve the peace of the Doon. Officers who prevented outbreak were naturally not so noticed as others who suppressed it. This was the case with Spankie, Hay, and some others, whose service met with no reward.

forgery. Signed, numbered, and registered, they were stocked in the treasury and used in cashing drafts, twenty-five per cent. being issued in specie so long as cash could be made forthcoming.

I cannot flatter myself that the notes were an immediate success, though it might not be anybody's fault. The uninstructed traders of that remote locality could hardly be blamed for accepting them only at a heavy discount: the odds may well have seemed to be against the recovery of the Government; and 12 per cent. was not much to charge for the risk. The notes were always worth ⅛ of a rupee; and after the fall of Delhi they rose to par: meanwhile the ladies and others who presented drafts at the Treasury were naturally annoyed at having to take three-quarters of the value in a depreciated currency. In this emergency the Punjab officials, ever vigilant even where not personally responsible, sent us several remittances of specie, which were loyally brought in by my zemindars with their armed militia. * In addition to these seasonable supplies, Spankie did his best to furnish both cash and provisions. Between the middle of May and the middle of September, we were indebted to this active friend for one hundred and twenty tons of grain and a quantity of bullocks, besides nearly a lakh and a half of rupees, equal to two years' revenue of the Doon at that period. With such assistance we managed to get through that terrible time without starvation and without bankruptcy. The hated "shinplasters" were a necessary evil, and everyone had to accept them for whatever they would fetch, so long as the stress endured. When the news of the taking of Delhi reached us, in September, confidence improved; and the more acute members of the community, observing the turn of the tide, bought up as much of the paper as they could get. The discount immediately disappeared; but not the complaints against the unfortunate originator of the notes. For the road being opened to Meerut allowed of the letters of the grumblers getting as far as the Commissioner there, who immediately directed me to stop the issue and call in all my paper, although he had no means of supplying my treasury with cash. This brought us up sharp, and people were more enraged than ever: it was bad enough, they said, to be fobbed off with the paper when it was at a discount, but to have it withdrawn just as it was becoming profitable was—oh! the deuce.

My friend, Robert Forrest—since distinguished as a writer of Indian stories—,† came to my rescue; and a timely statement of

* The Punjab was then ruled by John Lawrence; but my chief correspondent was Mr.—afterwards Sir—Donald McLeod, then Financial Commissioner. The Doon was, of course, quite out of their jurisdiction, but they were too patriotic and high minded to withold help at such a crisis.

† *The Touchstone of Peril;* and *Eight Days;* both much admired in later times.

his in the only up-country paper that had escaped the storm—the *Lahore Chronicle*—helped to put the saddle on the right horse. Nevertheless, I do not believe that my local influence and official reputation could have failed to suffer greatly. I had to support—as best I could, with a superior who had as narrow an intelligence as was compatible with his excellent moral nature—the misunderstanding of the majority of the European community. I have already mentioned my unfortunate habit of levity and not always seasonable joking; and I caused further offence by an incapacity of sympathy with what I looked upon as injustice or indiscriminate revenge. When the neck of the rebellion was broken and the work of punishment began, I thought there was too much of this, and showed it in deeds no less than in words. The Commissioner was by nature a genial and kind-hearted man; but, when next we met, he reproached me for what he thought undue mildness, observing that "it was easy to see that I had lost no friends in the late events." He thought, apparently, that private passion was a decorous motive in public employ. The subject is both painful and unprofitable, or some curious instances might be related. Enough has, perhaps, been said to explain—if not to justify—the effect produced on the usually just natures of British officers by such a dreadful trial.* I need only add that my conduct was twice brought before Lord Canning, who completely exonerated me, and afterwards expressed his positive approval, through his Private Secretary, Mr. Lewin Bowring, C.S.I.

The year 1858 passed in the gradual restoration of order, and the gradual resumption of routine duty. After the capture of Lucknow and Sir Hugh Rose's astounding successes at Jhansi, there was no longer any question but one of time with the rest of Upper India. We had a period of suspense, and even of trial, on our Eastern boundary, whence, indeed, an incursion, that for a moment had a formidable appearance, was made in the neighbourhood of Hardwar. But Brigadier Jones entered Rohilkund from Rurki, and drove all before him till he met Sir Colin Campbell at Bareilly. That town was taken on the 7th of May, and before the end of the month, the Commander-in-Chief was free to turn to the pacification of Oude.

I was so far fortunate throughout this time of trouble that my small district was free from disturbance, and, with the exception of the plunder of my goods left in the Deobun Bungalow, no European suffered in property or person. Nevertheless, I was not satisfied with so obscure a scene; and when

* "The English are not kind, but they are just," is the testimony borne some years later to a distinguished Belgian traveller, Count Goblet d'Alviella. The saying was true, on the whole, though not universally exemplified in 1858.

Jones ("the avenger") went into Rohilkund, I volunteered to accompany the force. The offer was not accepted; and by the end of the year I saw several of my juniors promoted to full-paid charges, while I was still only drawing half-pay in the Doon. As Lord Canning had been in charge of the N.-W. Provinces (after the lamented death of Mr. Colvin), I made my first remonstrance to him, receiving in reply the expression of satisfaction above recorded. It was, however, accompanied by the strange proviso, that it was not to be used to influence the new Lieutenant-Governor, Mr. (afterwards Sir George) Edmonstone. The only hope of transfer to a better post now lay in putting the case before that distinguised officer. My friend, of whose maleficent influence mention has been already made, was now Secretary to the Local Government, and was understood to say that I was kept in the Doon by my own desire. As I had only accepted the appointment three years before on a written understanding from him that it was "pending further promotion," it seemed that there was some mistake that would be best rectified in a personal interview; the roads were still unsafe; but I thought I might venture down country by way of the Ganges canal. From Dehra to Allahabad— whither the provincial head-quarters had been moved from Agra— was about 500 miles; but from Rurki to Cawnpore the canal provided a fine waterway to any one who chose to go down it. I accordingly hired two boats, one for living in, the other for cooking and for my servant. The voyage was calm and solitary; I was not only unmolested, but I saw no sign in the country bordering on the Canal to show that war had passed there so lately. In about a week we reached Cawnpore, still raw with the scars of the tragedies of which it had lately been the scene. Here I made the acquaintance of Dr. W. H. Russell, the famous *Times* correspondent, and proceeded to Allahabad by railway in company with him and Sir Wm. Mansfield, afterwards Lord Sandhurst. On reaching Allahabad, I found the Lieutenant-Governor present, and I was accorded an interview, at which I laid my case before him, but found no prospect of immediate satisfaction. Somewhat sadly, I returned to Dehra; and the first thing that awaited my arrival was the death of my little daughter, the first of many such blows that I was destined to endure.

The year 1859 passed without any memorable event. In the hot weather I took a short leave of absence and went, with my wife and another lady, for a short excursion into the Alpine region above Mussoorie. Our first intention was to visit Gangotri, the source of the Ganges, about 10,000 feet above sea-level, and a celebrated shrine of pilgrimage: but, after we had got within a couple of marches, the weather became rough, and the

Hindustàni servants suffered so much from cold, that we were fain to diverge to the West, and cross the head of the Düab, or tract between the Ganges and the Jumna. The scenery was as fine as wooded mountains can afford in the absence of water; and we found the people gentle and hospitable. On the sunny slopes facing south was herbage resembling that of Europe, with many wild flowers such as bloom in early summer. On the more exposed peaks the rocks stood hot and bare; but in the glens our path often led by rushing streams and through lovely woods of oak, cedar and other *coniferae*, interspersed with tree-rhododendra blazing in scarlet bloom. After some ten days wandering and sketching, we reached the foot of the great glacier whence the Jumna issues, and made arrangements to ascend, the following morning, to the source. The river rises on the south of a mountain nearly 21,000 feet above the sea, the actual spring being half-way up. On one side is a circular pool, out of which rises a geyser of boiling water, leaping some 40 feet into the air; on the other, the infant river runs beneath a bridge of ice. We sate down to breakfast after our climb; and I recollect that a servant had to hold an umbrella over the ladies' heads to protect them from the falling snow. It was the 24th May; and it must be a rare experience for English people in India to breakfast in a snowstorm on the Queen's Birthday. We returned down the valley of the Jumna, entering Jaunsár at the junction of the Tons: on the way, we came upon the very finest deodar-cedars I have ever seen, standing on a bluff above the river. This tree closely resembles the cedar of Lebanon in its later growths, but the specimens growing in England are not yet old enough to show the full development. The wood is largely used in India for railroad sleepers, being highly resinous and unpopular with the white ants, which work such havoc with ordinary timber in that country.

The rest of the year passed in the usual way: the measurements advancing in Jaunsár and getting fairly under way in the Doon. Mr. Edmonstone came up in the beginning of the cold weather and pitched his camp at Dehra: his hostile Secretary had gone to some higher sphere, and been succeeded by my old friend, Sir George Couper; and I made use of the opportunity to obtain a fresh consideration of my case. The Lieutenant-Governor was pleased to go into the matter seriously: he saw that I had been misrepresented; that I could really do better work than potter with a plane-table round the miniature fields of Jaunsár and the Doon; and he came to the determination that I should be nominated to an approaching vacancy in my old district of Mozafarnagar. The Collector there was a gentleman who had been at Rugby with me as a lad, and afterwards got to stand in my light, more than once, in the paths of my pro-

motion : we resembled, in fact, Pitt and Fox, as described in the Baboo's celebrated essay, who had been "friends in youth, but afterwards became contemporaries." Mr. E—— was, however, going home on furlough, and I was to succeed him, not only as District Officer, but also in charge of the "Settlement" then in course of renewal on the expiry of the 30 years' lease. E—— had already started the survey, which, in those days, was not, as it is now, the work of a special scientific department, but was conducted by the native staff under the eye of the Collector and his Assistants. The members of the Civil Service had not received any training as surveyors, so that we had not only to teach our subordinates but to learn the art ourselves.

# ART. II.—THE GEOGRAPHICAL DISTRIBUTION AND MUTUAL AFFINITIES OF THE INDO-ARYAN VERNACULARS.

BY G. A. GRIERSON, PH.D., C.I.E., I.C.S.

THE languages spoken at the present day in the Peninsula of India, are usually divided into three main groups, *viz.*: (1) The Aryan Languages; (2) The Dravidian, and (3) Others. The last group is principally composed of the so-called Kolarian, and of the Tibeto-Burman dialects, whose habitats are, respectively, the central hill country of Hindustan, and the mountains which form the northern and north-eastern boundaries of India proper. The Dravidian languages are principally confined to the Deccan, though sporadic dialects of this group are found even so far north as the Ganges Valley, The Aryan languages, roughly speaking, cover the whole of the northern plains of India, penetrating, in the case of Kāshmīrī and Naipālī, into the heart of the Himalayas. They have followed the course of the Ganges down to its delta, and have conquered the fertile plains on both sides of the Brahmaputra as far as Sadiya, near which place it enters Assam from Tibet. The entire course of the Indus recognizes their sway, and on the east and west coasts of the Peninsula they have pushed far to the south, displacing Dravidian languages—on the one hand Kandh (Khond), Gond and Telegu, and on the other hand Kanarese.

Throughout the present article I shall call these Aryan languages the Indo-Aryan Vernaculars, it being understood that by this term is meant the Vernaculars of the present day, and not the ancient Aryan vernaculars of India, such as Vedic, Sanskrit, Pali, or Prakrit, which are no longer living languages. They have been called Gaudian, a name derived from the Gauda or Gaur tribes of Northern Hindustan, and having no connection with the other Gauda—the Kingdom of Bengal. This word Gauda is often opposed to Dravida, or Southern India, by native writers, and hence there is a certain appropriateness in calling the great rival of the Dravidian tongues by the name Gaudian; but the term has not found universal acceptance, and is liable to misconstruction owing to the two-fold meaning of the word Gauda. It has, therefore, been considered advisable to adopt, instead of this very convenient word, the somewhat unwieldy periphrasis of Indo-Aryan Vernacular.

Readers of the *Calcutta Review* will not require to be reminded of the services rendered to science by the researches of

scholars like Beames and Hoernle. The Comparative Grammar of the modern Aryan languages of India, of the former, and the Comparative Grammar of the Gaudian languages, of the latter, are classical works, inexhaustible founts of erudition, to which all students must go who wish to learn the truth about the languages of Northern India. The first volume of Beames' great work appeared in 1872, and the Gaudian Grammar some nine years later. Both of these volumes gave general sketches of the geographical position and relative importance of the vernaculars described by them, which were complete and thorough so far as sources of knowledge were then available. But at that time no attempt had been made to number the speeches of India. Even the boundaries of languages had not been defined. For some languages, the only materials then available, were incorrect translations of portions of the Bible, or short lists of words, whereas we have now grammars and dictionaries of all. Beames did not attempt to discuss Kas'mīrī or Naipālī, and even Hoernle, writing ten years subsequently, did not venture to include the former in his field of view. Now we have an excellent grammar and vocabulary of Naipālī, and three good grammars and a vocabulary of Kashmīrī, and even printed books in each. Beames' work gave the first great impetus to the scientific study of the Indo-Aryan Vernaculars, and since 1872 a small band of workers, including men like Kellogg, Temple, and Pargiter; missionaries, soldiers, and civilians; have devoted their hard-earned leisure to finding out what the people of North India really do say, and what they themselves call the languages they use.

The census of 1891 came at a happy moment for this purpose. Much material had been collected towards the classification of Indian languages, and progress had even been made towards their arrangement. Scholars were beginning to group the languages, which had been described by their predecessors. In that year a language census of India was taken for the first time, and we became able to say, not only how many people spoke the various languages which were spoken, but where they spoke them. This last point, strange as it may appear, was always more or less doubtful—a state of affairs due principally to the fact that the same name connoted different things to Europeans and to natives. For instance, up to a few years ago, a European said that a man of Tirhut spoke Hindī, but the man of Tirhut, on the other hand, said that Hindī was only spoken in the Doāb, and that he spoke Maithilī. So also for other languages. Nomenclature was doubtful, and the boundary between dialect and language was indistinct.

The census has changed all that. We now know what the native of each country calls his own language, and surely it is

he, and not we foreigners, who has the right to say what its name is. We prefer to call our own language English, and we should be indignant if any one else called it Scotch or Low Dutch, and yet that is what *we* have been doing ourselves in India.

Once the habitats of the various forms of speech were fixed, the turn of the European scholar came, and he has been able to apply the tests of Philology and to decide what local speech is a dialect and what a language, and what groups of dialects, considered together, form what languages. I propose in the present paper to state briefly the results of this enquiry. The task is rendered an easy one by the fifth chapter of Mr. Baines' brilliant report on the census of 1891. The section on the mother-tongue gives an amount of information, new and old, all admirably arranged, which is of the utmost value to all students of Indian languages.

According to that census, the population of India (excluding Burmah) may be taken as about 285 millions.* Of these nearly 210 millions† speak Indo-Aryan vernaculars, 53 millions Dravidian, and the rest other languages.

The Indo-Aryan vernaculars as classified into languages, according to the latest opinion of experts, are the following. I shall deal with their dialects in detail later on.

A. WESTERN FAMILY.

(a)—*North-Western Group.*

| | | | | | |
|---|---|---|---|---|---|
| Sindhī (S.) ‡ | spoken by about | ... | ... | 2,590,000 | people. |
| Kāshmīrī (K.) | ... | ... | ... | 4,090,000 | ,, |

(b)—*West Central Group.*

| | | | | | |
|---|---|---|---|---|---|
| Pañjābī (P.) | ... | ... | ... | 17,720,000 | ,, |
| Gujarātī (G.) | ... | ... | ... | 11,060,000 | ,, |
| Rājputānī (R.) | ... | ... | ... | 13,150,000 | ,, |
| Hindī (H.) | ... | ... | ... | 35,820,000 § | ,, |

(c)—*Northern Group.*

| | | | | | |
|---|---|---|---|---|---|
| Central Pahārī (Ph.) | ... | ... | ... | 1,150,000 | ,, |
| Khas or Naipālī (N.) | | ... | ... | 3,020,000 ‖ | ,, |

* This includes five millions added as an estimate for the population of Nepal, which was not included in the census.

† Including the population of tracts like Rajputana and Nepal in which there was no language census.

‡ The letter after each name represents the conventional sign by which it is usually referred to in scientific works.

§ These figures are only approximate, as the census of 1891 does not distinguish Bs. and B., but includes them under H., to which (including the Halabī dialect) it gives a population of 85,819,093.

‖ These figures are approximate only. Nepal was not included in the operations of the census of 1891.

B. EASTERN FAMILY.

(d)—*East Central Group.*

| | | | | |
|---|---|---|---|---|
| Baiswārī (Bs.) | ... | ... | 20,000,000 | ,, |
| Bihārī (B.) | ... | ... | 30,000,000 | ,, |

(e)—*Southern Group.*

| | | | | |
|---|---|---|---|---|
| Marāthī (M.) | ... | ... | 18,930,000 | ,, |

(f)—*Eastern Group.*

| | | | | |
|---|---|---|---|---|
| Bangālī (Bg.) | ... | ... | 41,340,000 | ,, |
| Assamese (A.) | ... | ... | 1,440,000 | ,, |
| Uriyā (U.) | ... | ... | 9,010,000 | ,, |
| | | | 209,320,000 | |

These fourteen languages are grouped according to linguistic affinity. There is, however, no hard-and-fast line between each group, for contiguous languages are rarely separated by boundary pillars, but usually insensibly merge into each other. For instance, Pañjābī has been classed as a member of the West Central Group, but in the Multānī dialect it bears marks of close affinity to Sindhī, which is a member of the North-Western Group. Again, Baiswārī occupies an intermediate position between Hindī and Bihārī, and may with considerable propriety be classed as a member of the West Central Group. By some scholars it is denied the dignity of being a separate language at all, and is classed merely as a dialect of Hindi. Pañjābī again has certain affinities with Kāshmīrī.

We now proceed to consider these languages more particularly. The annexed map will serve to illustrate what follows.

*Sindhī* is the language spoken in Sindh,—the country on each side of the lower portions of the Indus, commencing at about latitude 29 N. In the north it merges into the Multānī dialect of Pañjābī, and on the east into the Mārwādī dialect of Rājputānī. On the south it gradually becomes Gujarātī through the Kachhī dialect of that language, and on the west it is bounded by the languages of Balūchīstān. Sindhī has three main dialects, the *Lārī*, spoken in Lāru or Lower Sindh, including the delta of the Indus and the sea coast, the *Sirāiki*, spoken in Sirō or Upper Sindh, north of Haidarābād, and the vigorous, uncouth, *Tharēlī*, spoken by hunters and outcaste tribes in the Tharu or Desert of Sindh, which forms the political boundary between that province and Mārwād. (Marwar of the maps.) The last dialect is much mixed with Mārwādī. Larī is the literary dialect of Sindhi, but Sirāiki is considered the purest. Kachhi, which in this article is classed as a dialect of Gujarātī, may, with almost equal propriety, be classed as a dialect of Sindhī.

*Kāshmīrī*, in its narrowest sense, is the language spoken in the valley of Kashmir. For the purposes of the present investigation, I have included the many Aryan hill dialects

spoken to the north and west of the valley, in Chitral and elsewhere, and also dialects spoken by the hill tribes between Kashmir and the Pañjāb which are grouped together under the title of *Western Pahāri*. According to the census of 1891, 1,520,000 people spoke Western Pahari, and 29,000 people, resident in other parts of India, spoke Kash'miri as their mother-tongue. No language census has been taken of the Kashmir State, the total population of which is, however, 2,540,000. Kashmīrī proper has many dialects, but the language has not yet been sufficiently investigated to allow definite information on this point to be recorded. Kāshmīrī is bounded on the east by Tibetan; on the north and north-west by little known Central Asian dialects; on the south-west by Pañjābī; and on the south by Pañjābī and the Central Pahari dialects. To a greater extent, even, than Sindhī, it is one of the outposts of the Aryan languages of India.

*Pañjābī* is the language of the Pañjāb. Its eastern boundary is a line about midway between the rivers Satlaj and Jamna, along which it insensibly merges into Hindī, and, farther south, into the Mārwādī dialect of Rājputānī On the south it is bounded by Sindhī; on the north and north-east by Kashmīrī and the Western Pahārī dialects above-mentioned; and on the west by Pashtu, the Iranian language of Afghanistan. Panjābī, being an uncultivated language, abounds in dialects, which may be divided into two different groups, the standard Pañjabī of the north, and the *Jatkī* or *Multānī* of the south. The latter is much infected with Sindhī and Mārwādī forms, and is spoken by 1,750,000 people. Standard Panjabi is also divided into two main varieties, an eastern and western, to which may be added the *Dōgrī*, or the lower hill dialect of Jammu westward, which is closely connected with Western Pahārī. A glance at the map will show that Pañjābī has intruded itself between Sindhī and Kāshmīrī, the two great languages of the North-Western Group. There can be no doubt that, originally, the language of the Pañjāb also belonged to this group, and that, in comparatively modern times, political causes have led to its absorption by the more actively aggressive West Central Group of languages. Although, at the present day, Pañjābi must certainly be classed as a member of the West Central group, it still retains old forms, which distinctly point to its original north-western character.

*Gujarātī* is properly the language of Gujarāt, or the portion of the western litoral of the Bombay Presidency bounded on the north by the Rann of Cutch, and on the south, roughly speaking, by the town of Bombay. It includes Surat and the Baroda and Kathiawar States. It is separated from Sindhī on the North by Cutch, the vernacular of which, *Kachhī* (spoken

by 440,000 .people), is included, in the present article, under Gujarātī, but which is really a transition dialect between the two languages, and may be classed with either. It is bounded on the west and north-west by Rājputānī, into which it insensibly merges, without any very definite boundary line. On the south-west and south, it is bounded by Marāthī, from which it is more sharply divided. Gujarātī has three so-called dialects, according as it is spoken by Hindus, Musalmāns or Parsīs, but has few local varieties. In the Deccan there are several colonies of Gujarātī silk weavers, dating from very ancient times, who still preserve their ancestral language in the form of a dialect called *Patnulī*. Their number is 78,000.

*Rājputānī* is a name given, for the sake of convenience, to a large number of Rajput dialects, of which Mārwādī (Mw), the dialect of Mārwār with Jōdhpur as its centre is the most important. It may be roughly described as the language of Rājputānā, which has no standard dialect, each tribe preserving its own local idiom. Besides Mārwādī proper, it includes dialects, such as the *Mairwādī*, of the Mairs, spoken north of the Aravalli Hills; *Mēwādī* spoken to the south of these hills in Mēwār with Udaipur as its centre, and *Bīkānīrī*, spoken in Bīkānēr, to the north and west of Mārwār. These form a western group. An eastern group consists of the *Jaipūrī*, of Jaipur, the *Hārautī*, of the Hāṛās, spoken in Kōtā and Bundi, the *Alwārī* in Alwār to the north and east of Jaipur, and the *Ujjainī* of Indore to the south of the Hārautī. All these dialects have a close family resemblance. Rājputānī is bounded on the west by the Multānī dialect of Pañjābī, by the Tharēlī dialect of Sindhī, and by Gujarātī, into all of which it insensibly merges. On the north it is bounded by the Braj and Kanaujī dialects of Hindī, from which also it has no decisive boundary line. On the east it is bounded by the Bundēlkhandī and Baghēlkhandī dialects of Baiswārī, to which the same remark applies. On the south it is bounded by Mārāthī, from which, as in the case of Gujarātī, it is sharply divided without any mixed border dialect.

The term *Hindī* is used in three different senses. It is used to mean the literary dialect which is the universal book language of the Ganges Valley as far east as Bhagalpur, but which is not the true vernacular of any part of India. For the sake of distinction this is now called High Hindī (H. H.) by accurate writers, and this term will be used in the present article. The name Hindī is also used loosely for the great mass of dialects belonging to the two central groups of Indian languages, excluding Gujarātī and Pañjābī. It thus includes all the Rājputānā dialects, Mārwādī, and the others, besides the Baiswārī of Oudh and Bundelkhand, and the entirely distinct dialects of Bihār. As

such it is sometimes called Hinduī. This use of the name is the popular one amongst Anglo-Indian writers, but is inaccurate and unscientific, and is not followed by native scholars. The third meaning is that adopted in this article, and it may be roughly defined as connoting the language of the North-Western Provinces from Cawnpur (Kānhpur) westwards. It is bounded on the north by the northern group of languages, Naipālī, and Central Pahārī; on the west by Panjābī, on the south by Rājputānī, and on the east by Baiswārī, which is the transition language between the West Central and East Central group. Hindī has two dialects, *Braj Bhāshā*, or, more shortly, *Braj* (Br.), and *Kanaujī* (Kn.). Braj is the dialect spoken in the Upper Gangetic Dōāb, its southern limit being about the town of Agra. It is the vernacular of the country round Muttra (Mathurā) and Delhi, and reaches as far north as the Siwālik hills and beyond, where it merges into Central Pahārī. West of the Jamnā, the boundary between Hindī, Panjābī and Western Rājputānī is hardly distinguishable. Braj is named from *Vraja*, the land of the Cow-pens and the scene of the early life of the god Krishna, the centre of which was Mathurā. Religious associations have given it a copious literature, which is read and understood all over Northern India. Kanaujī is the language of the Lower Dōāb, and extends to the south-east beyond Cawnpur. As we approach Allahabad, the spoken language loses its distinctive character and gradually becomes Baiswārī.

A few words must here be inserted regarding Urdū, Hindūstānī and High Hindī. Urdū is the mixed language, originally a kind of camp jargon, which gradually grew up round the armies of the Mughal invaders of India. These armies were composed of foreigners from beyond the Hindu Kush, speaking various dialects of Turki and Persian. The necessities of communication with the natives of India produced a language which grew as the armies progressed. The grammar was Indian, borrowed from various dialects, principally Panjābī, Mārwādī and Braj, and the vocabulary was partly Indian and partly foreign. As a rule, the verbs were of Indian, and most of the substantives (except a few very common ones) of foreign, origin. It was much as if an Englishman trying to speak French were to say "Mettez le book dans le book-case." In such a language, which was spoken by both conquerors and conquered in their mutual communications, there was necessarily a great deal of give and take, and affairs gradually crystallized into this condition. As the Mughal Court generally settled at Agra or Delhi, the Braj Bhāshā had naturally most influence in the formation of the language. These two towns, both founded by the Musalmāns, had great bazaars, and, from a camp language, Urdū became the language of the market, and finally even a

second language (beside Persian) of the Court. It now received a certain literary polish, and works of importance began to be written in it by Muhammadans. It was never adopted as a vehicle of literary display by the Hindus, and the followers of Islām, in using it for literature, overloaded it with the Persian and Arabic words and idioms which they considered were rendered necessary by the canons of good criticism. Such is the book-Urdū as we find it at the present day, a language with a composite Indian grammar, and a vocabulary principally composed of Persian and Arabic words. As such it is not intelligible to a Hindu who is not specially educated for the purpose. The market-language, however, remained little changed. Its very existence depended on its being understood by Hindus and Musalmans alike. Hence, while its grammar is the same as that of Urdū, its vocabulary is much more Indian. Out-of-the-way Arabic and Persian words are excluded, and commoner words of Indian origin are freely used. This phase of the language—which, while it is the vernacular of no part of India, is a useful *lingua franca* intelligible all over Hindustan,— is aptly called Hindūstānī. Its grammar, being mainly based on Braj, which, as has already been said, a religious literature has made popular and intelligible to Hindūs in Northern India, enables it to be readily acquired, and by its means a man of Nēpāl can converse with a Rājpūt, or a Pañjābī with a Bangālī, though neither of them can speak the other's vernacular.

High Hindī, on the other hand, is a modern creation, invented by Dr. Gilchrist and other English scholars, at the beginning of this century. The Asiatic Society of Bengal had lately been founded, and Sanskrit and Hinduism had just begun to be studied. Gilchrist and his companions imagined that Hindūstānī was the vernacular of Northern India, but that it had been so Persianised by the Musalmans, as to be unintelligible to Hindus. He therefore employed a well-known pandit of those days to translate several Hindūstānī books into a new language by omitting every Arabic and Persian word, and substituting a corresponding Sanskrit one in the place of each. The result was what is now called High Hindī (or popularly Hindī). It is a language with the same composite grammar as Urdū, and with an entirely Indian vocabulary. As such it can be read and understood by Hindūs only, to whom the Sanskrit words used are familiar. The very highest Hindī, in which recondite Sanskrit terms are freely used, can only be understood by Pandits, and, *mutatis mutandis*, has exactly all the same faults that highly Persianised Urdū has. When, however, discretion is shown, by the use of only the more common Sanskrit words which are known all over India, High Hindī is

a very serviceable *lingua franca* as a means of communication between Hindūs of different countries. High Hindī was fortunate in its literature, and in having the art of printing lent to give it strength immediately after its birth. The first books published in it achieved great popularity. It was backed up by the political influence of the English Government, and missionaries adopted it after the failure of Carey's bold attempts to translate the Bible into vernacular dialects of which he had no real knowledge. It has in this way acquired a distinct status of its own, and while it is never used for poetry (which is always couched in the real home-tongue of the poet), it has become the official prose language of Hindus from the Ambālā to the Kōsī, and already possesses a large and rapidly improving literature. Finally :—Urdū, being full of unusual Persian words, can only be written legibly in the Persian character. High Hindī, on the other hand, being full of Sanskrit words, can only be written legibly in an Indian character suited to the Sanskrit language. But Hindūstānī, having no rare words, either Persian or Sanskrit, can be written in either the Persian or the Dēvanāgarī character as it pleases the writer, or as the reader prefers.

Turning now to the northern group of tongues, it should be explained that the Aryan languages of the Himalayas, from Kashmīr to Darjīling, are usually grouped under one name, *Pārbatiyā* or *Pahārī*, that is to say, Hill-speech. These again fall into three sub-groups, the Western Pahāṛī, which has already been classed with Kashmīrī, the Central Pahārī, and the Eastern Pahāṛī or Naipālī.

The *Central Pahārī* language commences in the west where the Western Pahārī ends. It is impossible to draw any exact dividing line, but it is sufficiently accurate to consider the boundary as coinciding with the western boundary of the North-Western Provinces. It is the speech of the hill states of Garhwāl, near Mussoorie, and of Kumaun round Nainī Tāl, and has two dialects, *Garhwālī* spoken by 648,000 people, and *Kumaonī* spoken by 505,000. The eastern boundary may be taken to be the western boundary of Nepal, about longitude 81° E.

*Naipālī* means properly the speech of Nepal. This is not a good name, for, besides its one Aryan language, Nepal has no less than 13 Tibeto-Burman ones (with 16 dialects) spoken in different parts of that mountainous territory. The Aryan language has, amongst Europeans, acquired the name of Naipālī (*vulgo* Nepali) owing to its being the vernacular of the Gurkha recruits from Nepal who form so conspicuously gallant a section of the British army in India. They themselves call their language *Khas*, *Paharia*, or *Pārbatiyā*. If we adopt the terms Western Pahārī, and Central Pahārī for

the other Aryan hill languages already mentioned, it may be named appropriately *Eastern Pahārī*. About the twelfth century A. D. a number of Rajputs and Brahmans made their way into Nepal. Tradition states that some of them came from Chitor in Rajputānā, under Hari Singh, after the sack of that town by the Muhammadans. These men mixed with the Aryan and Tibeto-Burman tribes already existing there, and intermarriages occurred, the progeny being of caste lower than that of their Brahman and Rajput fathers. They were hence called *Khas* or 'fallen,' from the Naipālī word *Khas'nu* 'to fall,' but the Brahmans invested them with the sacred thread, and thereby gave them a higher social standing than the aborigines from whom they were sprung on the mother's side. This is the origin of the Gurkha race, whose head-quarters are at the town of Gurkhā, about fifty miles to the north-west of Kāthmāndū. Their language has been partly adopted by other tribes of the country, and is called after them *Khas* or *Khaskhurā*. It is now the *lingua franca* of Nepal. There has never been any census of that country, but the latest estimate of the total population is that it is five millions, of whom perhaps three millions speak the so-called Naipālī. The census of British India gives 24,000 as speaking Eastern Pahāriā in our territories. Naipālī is said to have a dialect called *Pālpā* spoken in the western extremity of the valley, but little is known about it. As might be expected from its origin, Naipālī is closely connected with the Western Aryan vernaculars of India.

With *Baiswārī* we first meet the Eastern Family of Indo-Aryan vernaculars, which differs from that of the west in many important particulars. These points of difference are, however, not prominent in the case of Baiswāri which occupies an intermediate position, and represents, as it were, an overlapping of the two. It is, indeed, doubtful with which group—the West Central, or the East Central—it should be classed. After considering the question as a whole, the majority of scholars incline to the opinion that it should rather be classed with the latter than with the former. Baiswārī is, properly, the language spoken in the province of Oudh the land of the tribe called Bais. It has also crossed the Ganges (being spoken at the apex of the Dōāb near Allahabad) and the Jamna, and is current as the vernacular of the important states of Bundelkhand and Bagheikhand. It is bounded on the north by Naipālī, on the west by Hindī and Rājputānī, and on the east by Bihārī. On the south it is stopped by the Gond tribes of the Central Indian hills. Roughly speaking it extends from the Nepal Taiāī on the north to Jabalpur in the south, and from Cawnpur in the west to Mīrzāpur in the east. It has two main dialects. The first is *Baiswārī* proper, spoken in Oudh

(population 12½ millions), and also called *Kōsalī* or *Awadhī*. This dialect is the only rival of Braj as a literary language of Northern India. High Hindī is only used in modern prose, but Braj and Baiswārī have been used for poetical composition for centuries. Braj owes its acceptance to the religious associations of its original home ; Baiswārī to the fact that it is the half way house between the extreme western and the extreme eastern dialects of Central North India. It is understood by the speakers of both groups who may be unintelligible to each other. It bears much the same relation to Hindī and Bihārī that Provençal does to French and Italian, respectively. Oudh, too, was for long a centre of Indian civilization, and was the birth-place of the celebrated hero Rāma-chandra. Its language finally became classical through the genius of the great poet Tulasī-dāsa, who, in the seventeenth century, wrote his famous Rāmāyan in that dialect. Since then Baiswārī has been the standard poetical dialect of Northern India, while Braj has been almost confined to poetry associated with Krishna, the hero of Gōkula, and with the herdmaidens of the land of Vraja. The other dialect is that spoken in Bundelkhand and Baghelkhand south of the Ganges. It differs little from Baiswārī proper, and is called indifferently *Bundelkhandī* or *Baghēlkhandī* as the patriotism of the speaker dictates. It is also called *Riwāī* from the important Native State of Rewa, which is situated in Baghēlkhand.

*Bihārī* is, properly speaking, the language of the Province of Bihār, but its use extends south through the Aryan portions of Chutia Nagpur, and even into a part of the Central Provinces. It is the first language which shows distinctively eastern characteristics. It has long been customary to class it roughly as a dialect of Hindī, but nothing could be more incorrect. It is much more nearly related to Marāthī and to Bangālī than it is to any of the Hindī dialects, and differs much more from Braj or Kanaujī than they do from Gujarātī or Pañjābī. Its grammar and its syntax are altogether different. It is bounded on the north by Naipālī, on the south by Uriyā and the Dravidian Telugu, on the east by Bangāli, and on the west by Baiswārī. It extends as far west as Mīrzāpur, where it gradually shades off into the dialect of Oudh, after including within its limits the famous City of Benares. Its eastern boundary may be taken as the river Mahānanda, north of the Ganges, and the Rājmahāl hills on the south. On the banks of the Mahānanda it is difficult to say whether the language is Bihārī or Bangālī, but south of the Ganges, it is brought to an abrupt stop by the Dravidian Mal-pahāriā, and the Kolarian Santhālī of the hills lying between south Bihār and Bengal. There is no fusion with these un-Aryan tongues. In the south it gradually fades away into

the Uriyā of Sambalpur,—its most southern dialect, the Chhattīsgarhī having distinctly Uriyā peculiarities. Bihārī has four known dialects: the *Maithilī* (Mth.) spoken in Tirhut, the ancient Mithilā, and also generally in the east of the tract, by about 9 millions of people: *Bhojpurī* (Bh.) spoken along the west, on both sides of the Ganges, from the Nepal Tarāī to near Jabalpur: *Magahī*: and *Chhattīsgarhī*. Bhojpurī is the dialect of Azamgarh and Benares, of the industrious cultivators of Sāran, and of the fighting men of Shahabad (in which the old town of Bhōjpur is situated). Its southern territory is difficult to distinguish from the south-eastern one of Baghēlkhandi. It is finally stopped in its southern course by the Gond tribes of the highlands of Central India. It may be considered to be spoken by about 12 millions of people of Central Hindūstān. *Magahī* or *Māgadhī* (Mg.) is the vernacular of the ancient Magadha, the home of Asōka, and of the ancient Māgadhī Prakrit. It is spoken in its purity in the districts of Patna and Gayā, the population of which two districts is about four millions. It is separated from Maithilī by the river Ganges, and from Bhojpurī by the river Sōn. It has penetrated south into Chutiā Nāgpur, where it is spoken by the Aryans who have settled amongst the wild Dravidian tribes of that region. It has thence reached into the Rāipur division of the Central Provinces, where it becomes a new isolated dialect—the *Chhattīsgarhī*—hemmed in on the west by Marāthī and on the east by the Uriyā of Sambalpur. This latter dialect is bounded on the south by Telugu, and a colony of the Dravidian Gonds lies also to its north. As might be expected Chhattīsgarhī shows many marks of Marāthī and Uriyā influence.

*Marāthī* is the Aryan language spoken in the North Deccan plateau, Berār, the western portion of the Central Provinces and of the Nizam's dominions, and in the Konkan littoral. It is bounded on the north by Gujarātī, Rajputānī, and Hindī. On the east and south it is bounded principally by the Dravidian Telugu and Kanarese. On the west it is bounded by the Arabian Sea. Marāthī has two dialects,—the *dialecta præcipua*, or pure Marāthī of the table-land of India, and the *Kōnkanī* (Kn.) spoken in the Konkan, or strip of country between the coast and the foot of the Western Ghâts. To these may be added *Goanese*, or the corrupt dialect spoken by the Portuguese Christians of Goa. In the census of 1891, some 314,000 were entered as speaking Kōnkani, and 38,000 as speaking Goanese. Marāthī of the table-land is a homogeneous language with few local varieties, and there is a curiously sharp border line between it and its northern Aryan neighbours. On the other hand, Kōnkanī is largely influenced by the Dravidian Kanarese,

and the further south it goes, the more and more it merges into that language till as we approach Mangalore (Lat. 13 S.) it disappears altogether. Mangalore may therefore be taken as the most southern point to which the Aryan languages have extended on the west of India. Note that, though locally situated in the West of India, Marāthī belongs to the Eastern Family.

*Bangālī*, as its name implies, is the language of Bengal proper. It is bounded on the north by Naipālī and the Tibeto-Burman languages of the Himalayas, on the south by the Bay of Bengal, on the south-west by Uriyā, on the west, north of the Ganges by Bīhārī, into which it insensibly merges, and south of the Ganges by the Kolarian tribes of Chutiā Nāgpur, on the north-east by Assamese, and on the east by the Tibeto-Burman tribes of Assam and Upper Burmah. It is spoken by a population of forty-one millions, and exceeds even Hindī in the number of people to whom it is a vernacular. As regards dialects, the literary Bangālī differs widely from that used in conversation: the difference is, however, one principally of vocabulary. The best spoken language is said to be that of Rārh, or Central Bengal, and though there are no recognised dialectic divisions, it varies in every district. The best known dialectic groups are the northern Bangālī of Dinājpur and Rangpur, which is gradually shading off into Assamese, and the eastern Bangālī of Dacca and Chittagong. To these may be added the peculiar Bangālī spoken by Musalmāns, full of corrupt Arabic and Persian expressions; and the south-west Bangālī of Midnapur, which is gradually becoming Uriyā.

*Assamese* is the vernacular of the Brahmaputra Valley in Assam. It is an offshoot of Bihārī, through Northern Bangālī, but has developed into an independent language with sound laws of its own. It is bounded on the west by Bangālī, and on every other side it is hemmed in by Tibeto-Burman tribes. No dialects have been noted of this language.

*Uriyā* or *Utkalī* is spoken in the province of Orissa, and also in the adjoining portions of Sambalpur in the Central Provinces, and of the Madras Presidency. In the very heart of this territory the hills are inhabited by Khond tribes, who speak a Dravidian language, so that the Uriyā area is almost divided into two separate tracts. Uriyā is bounded on the north by Bangālī, into which it merges in the district of Midnapur, and on the south by the Dravidian Khond and Telugu. On the west it gradually becomes the corrupt Bihārī of Chhattīsgarh, in the Central Provinces. Its eastern boundary is the Bay of Bengal, and to the south the Dravidian languages of the Coromandel Coast. It is said to have no dialects, but to be spoken in its greatest

purity in the native state of Gumsur, situated to the south, in the Ganjam district of the Madras Presidency.

With Uriyā, we conclude our geographical survey of the vernacular Aryan languages and dialects of India. It has been seen that I have classified them into two families, an Eastern and a Western, and into six groups, a North-Western, a West-Central, a Northern, an East Central, a South-Western, and an Eastern. A few observations may be made as to the mutual relationship of these families and groups. It will be more convenient to trace their growth downwards from the source than to follow their progress upstream. According to what I believe is the opinion of the soundest experts, we know from the earliest Sanskrit grammatical writers that, so long ago as five hundred years before Christ, an Aryan language was spoken in the north of India, which had gradually developed from the ancient Sanskrit vernacular spoken in Vedic times, and which was the ordinary language of intercourse in India. Parallel with it, the so-called classical Sanskrit developed in the schools of the Brahmans as a second literary language,—much, in fact, like the Latin of the Middle Ages. This vernacular language is called, and has been called for centuries, Prakrit, *i.e.*, the natural, unartificial language, as opposed to Sanskrit, which means the artificial language. As to whether this old vernacular had any dialects, we are not in a position to say positively, but, as we know that there were dialects in the Vedic times, there is every reason to believe that it possessed them too. It covered a wide extent of country from the Indus to the Kōsī, and it would be surprising if there were no local variations of speech.

Two hundred and fifty years before Christ we find the famous rock edicts of Asoka written in this language, and here we see indications that the vernacular language of Northern India did contain two main dialects, a Western and an Eastern Prakrit.

These Prakrits became, in later times, and under the influence of religious and political causes, the subject of literary study: poems were written in them, and they were freely used in plays. We have grammars of them written by contemporaries, or by men who lived only a short time after they had become dead languages. It may be taken as a convenient date for fixing the memory, that these Prakrits were dead languages by, say, 1000 A. D.

We are able to say, from the study of the grammars of these later literary languages, that there was a Western Prakrit, and Eastern Prakrit, each possessing distinctly marked characteristics. The Western was called *Saurasēnī*, from Surasēna, the Dōāb country where its head-quarters were, and the Eastern

*Māgadhī*, or the language of Magadha, the present South Bihār. Between these two, there was a kind of neutral ground, the language of which was called *Ardha-Māgadhī*, or half-Māgadhī, which partook of the nature of both languages.

Allowing for subsequent development, this is very much what we find existing in Northern India at the present moment. There is a great family of Western languages, of which Braj, the dialect of the Doab, may be taken as the type, spoken from the Indus to about Cawnpur, and a great family of Eastern languages, of which the language of South Bihār may be taken as the type, spoken from, say, Mīrzāpur to the eastern boundary of Bengal and Assam. In the middle, between Cawnpur and Mirzapur, there is the Baiswārī, which it is difficult to class definitely either as eastern or western, and which corresponds exactly with the ancient Ardha-Māgadhī.

Within, however, these two main Prakrits, a process of disintegration gradually went on. The extreme north-west developed a dialect of its own called the *Apabhramsa*, or The Decayed Language, *par excellence*. This we can identify as the direct ancestor of Sindhī and Kashmīrī, the members of the north-western group of languages. In later times we find Saurasēnī dividing itself into *Gaurjarī*, *Avantī*, *Saurasēnī* proper, and Mahārāshtrī the progenitors of Gujarātī of western Rājputānī, of Eastern Pañjābī and Hindī and of Eastern Rājputānī respectively. On the other hand we find the eastern Māgadhī (from which sprang Bihārī) gradually developing two new Prakrit dialects, the *Gaudī* or *Prāchya* representing Bangālī, and the *Utkalī* representing the modern Uriyā.

In the Western Pañjāb, no doubt, the North-Western Apabhramsa must also once have been spoken, but political reasons, and the higher civilization of Central Hindūstān gradually ousted it, and now we find there a member of the West-Central group descended from the ancient Saurasēnī. Sindhī was protected from a like fate by the inhospitable barrier of the Indian desert, and Kashmīrī by its mountains.

Regarding some of the Prakrit dialects abovementioned, we know little beyond the names, and their geographical location is not always free from doubt. This is specially the case with Mahārāshtrī which some competent scholars believe to have been merely a poetic form of Saurasēnī, and not to have been the spoken dialect of any particular part of India. In that case Eastern Rājputānī, like Western Rājputānī, must be considered as descended from Avantī.

There is one point which must be noted. Of the principal Prakrits we have literary specimens, but it is not from the language of these specimens that we should derive the modern vernaculars. Those literary specimens which have come down

to us, were, with few exceptions, written by native scholars according to theoretical rules, long after the languages themselves were dead. We have little or no remains of living Prakrit. We do know, however, that, beside THE Apabhraṁsa spoken in the North-West, there was a low form of Saurasēnī spoken by the vulgar, of which we actually have a grammar written in the 12th century, also called Apabhramsa, or decayed, and which for the sake of accuracy we may call Apabhramsa Saurasēnī, or decayed Saurasēnī, to distinguish it from THE Apabhramsa. Although the grammarians do not mention it, there must also have been an Apabhramsa Māgadhi, or decayed Eastern Prakrit, a language which Prakrit scholars find little difficulty in reconstructing. It is from these Apabhramsas, these decayed Western and Eastern Prakrits, and not from the artificial Prakrits of literature and of the grammars, that we must derive the modern Indo-Aryan Vernaculars. It is a curious commentary on the tendency of all Indian literature, that, before the word Prakrit, which means "natural," we should have to set the adjective "artificial," to describe the language in which a mass of prose and poetry is contained.

There is still Marāthī to be accounted for. It is derived from the Prakrit dialect called *Vaidarbhī* or *Dakshinātya*, about which, however, we know little but the name. *Vaidarbhī* means the language of Vaidarbha, or the Berars, and *Dakshinātya* the language of the South. The few examples we meet in the plays tell us nothing of its character, and we only know that in lists of Prakrit dialects it is grouped together with Māgadhī and Ardha-Māgadhi, that is to say with the Eastern Prakrits. Such is the case at the present day. Marathī follows the Eastern, and not the Western languages in its grammar and vocabulary. It belongs ultimately to the Eastern Family; and, though a long portion of its boundary marches with the Rājputānī and Gujarātī of the Western Family, it refuses to mix with them, any more than (save under compulsion) it mixes with the Dravidian languages to its south. There is no insensible merging off into Gujarātī or Rājputānī; there is, on the contrary, a sharp border line, a linguistic barrier which prevents intercommunication between the separated nationalities. On the other hand, where it meets the Chhattīsgarhī dialect of the Eastern Family, it mixes with it freely, and there is no distinct line of division between the two languages. Although Chhattīsgarhī is a dialect of Bihārī, a student must also acquire a knowledge of Marāthī before he can master it. We must hence class the South-Western Marāthī as an offshoot of the Eastern Family of languages.

Finally, we have the Northern Group of languages. As regards Naipālī, its origin has been already explained. It is a

corruption of the language of Rājputānā, mixed with the dialects of the few Aryan tribes of Nepal. Its basis is, therefore, the Rājputānī, and it belongs ultimately to the Western Family of languages.

The origin of Central Pahārī is obscure. Although most closely connected in its grammar with Naipālī, it also shows signs of independent relationship with Hindī, with which its boundary marches. Like Naipālī, it must be considered as ultimately to be referred to the Western Family, of which the whole northern group is evidently an offshoot.

In conclusion, the following table will, it is hoped, show clearly the mutual relationship of the Indo-Aryan Vernaculars.

## ART. III.—INDIAN FOREST METEOROLOGY.

FOREST Meteorology is a science that has sprung up only of recent years, and it is one that receives much less attention in India than its importance for the general well-being of the country certainly deserves. Several series of sporadic observations on forest meteorology were made towards the end of last century; but the first systematic observations recorded were those conducted by Pictet and Maurice at Geneva, from 1796 to 1800, on a very small scale indeed. Many scattered observations were also made in field and forest by Kaemtz previous to the publication of his work on meteorology in 1831 to 1834. Tentative searches after reliable information were subsequently made by Bravais and Thomas in Lapland during 1839-40, and by Bourgeau in Canada during 1857-58; but the real beginning of systematic observations of the modern scientific kind was made by the Becquerels, in 1858, in the vicinity of Paris, the first results being published in 1864 in the form of a memoir relating to forest meteorological problems. In 1859 and 1860 the assistance of the Forest Department of France was obtained in recording observations on the disposal of rainfall in woods compared with that in the open fields; whilst similar observations were being made in Germany by Hofmann at Giessen and Baur at Hohenheim. Within the following decade, stations for regular comparative observations were established in Saxony, Bavaria, Bohemia, Posen, and Switzerland. In France, in 1866, observations were commenced in connection with the forest school at Nancy. A special service of forest meteorological stations was also organised for Germany, when seventeen pairs of stations were selected in different parts of the empire for comparison of simultaneous readings within and without the forests. In 1876, the Swedish observations were begun. In 1884, a radial system of stations was established in Austria.

In India, however, where disturbances in climatic conditions and scantiness of rainfall in the past have often led to the horrors of famine, no special arrangements seem to be considered necessary for acquiring information that might possibly be of untold value for the benefit of future generations. But, now that the importance of maintaining large compact areas under forest growth has become thoroughly realised, the desirability of endeavouring to ascertain the true nature and full extent of their influence on atmosphere, soil, and agricultural productivity has become stronger than ever it previously was. Up to the present,

however, we must mainly look to other countries, and notably to Germany, to furnish us with the results of continuous careful observations extending over a series of years. Many of these can be directly applied to the circumstances of India; but others must either be rejected as inapplicable to, and inconsistent with, the conditions of India, or else modified by collation with the ordinary observations so extensively and carefully made by the Meteorological Department throughout this empire.

1. *The Influence of Forests on Atmospheric Temperature.*

Forests and Atmospheric Temperature.

The annual average temperature within forests growing in closed canopy is lower than in the open; but the mean annual difference has in Europe been found to be only slightly in favour of the woodlands. The prevention of the insolation of the soil during the long hot days of the Indian spring, and the rapid transpiration taking place through the foliage of the tree-crowns, exert a much greater influence on the atmospheric temperature than can be ascribed to the shelter from wind and to decrease of nocturnal radiation. The variations in temperature between the trees themselves and the air in the open will, of course, be greatest during the hot months of April, May and June, when transpiration is most active, and when the circulation of the sap is most energetic. In forests it is cooler during the day, and warmer at night, than in the open; for, during the day, the crown of foliage protects the soil from insolation, and at night it prevents the radiation of warmth.

Owing to these differences in temperature, beneficial currents of air are induced between the forests and the open country, which follow the same law as obtains with regard to land and sea breezes. During the day, the cooler and moister air of the forest sets outwards, to take the place of the heated air ascending in the open; at night, the current sets in from the open, cooled by radiation, towards the forest.

The European statistics upon which these conclusions are based, prove that the immediate action of forests is to modify the daily maxima and minima of atmospheric temperature; whence it may be deduced that a comparison of the absolute extremes of temperature during the year must exhibit definitely the sum-total of the influence exerted by forests on the temperature of the atmosphere. This modification of the extremes of temperature, which are bad alike for man and beast, as well as for agricultural operations, is of immense importance from a national-economic point of view; for many places that were once fertile are now little better than barren wastes, in consequence of the reckless denudation of forest.

The effect of forests on temperature is strikingly marked

in the details that may be given for Northern India during the three hottest months of the year, April, May and June before the heat begins to be well tempered by the S.-W. monsoon rains fairly setting in. The temperatures were compared by Dr. Woeikoff, in his book on the climates of the earth, over a territory including, on about the same line of northern latitude, the three different types of (i) treeless or open, (ii) intermediate or sparsely wooded, and (iii) wooded. In the treeless or open tract the vegetation is burned up by March, save where the soil is kept moist by irrigation. The intermediate or sparsely wooded tract extends above the delta of the Ganges, where there are scattered trees, groves or topes, and bamboos. The wooded tract is situated within the dense forest areas on each side of the middle course of the Brahmaputra and its tributaries. The following are the comparative results of the observations recorded, as shown in Fernow's *Forest Influences*, (U. S. Department of Agriculture, Forestry Division, Bulletin No. 7 of 1893, page 91):—

| Station. | | | | Mean Temperature. | | | | Mean Maxima. | |
|---|---|---|---|---|---|---|---|---|---|
| Name. | Lat. | Alt. | Distance from sea. | Year. | April. | May. | June | Decr | April and May. | Year. |
| | ° | Feet | Miles | ° | ° | ° | ° | ° | ° | ° |
| *Open or Treeless Tract* | | | | | | | | | | |
| Agra | 27 | 555 | 670 | 79 | 88 | 94 | 95 | 62 | 106 | 116 |
| Lucknow | 27 | 369 | 533 | 78 | 87 | 92 | 92 | 61 | 104 | 114 |
| Allahabad | 25½ | 307 | 432 | 78 | 88 | 92 | 91 | 61 | 106 | 110 |
| Patna | 25½ | 183 | 323 | 78 | 87 | 89 | 88 | 62 | 101 | 112 |
| Burhanpur | 24 | 60 | 161 | 78 | 85 | 89 | 84 | 66 | 102 | 109 |
| *Intermediate or Sparsely wooded Tract* | | | | | | | | | | |
| Durbhunga | 26 | 116 | 337 | 77 | 84 | 85 | 85 | 63 | 96 | 105 |
| Purneah ... | 26 | 125 | 283 | 77 | 84 | 83 | 84 | 63 | 98 | 105 |
| *Wooded Tract* | | | | | | | | | | |
| Silchar .. | 25 | 104 | 131 | 76 | 78 | 80 | 82 | 66 | 87 | 99 |
| Goalpara ... | 20 | 384 | 249 | 76 | 78 | 78 | 80 | 65 | . | ... |
| Sibsagar .. | 27 | 333 | 364 | 73 | 74 | 78 | 83 | 61 | 8. | 99 |

Although the difference in temperature may partly, as has been claimed, be due to other causes than the forests, yet the fall in the temperature in the vicinity of the forests during the hot months is distinctly noticeable; and this is still more the case with regard to the maxima. The cooling effect of large masses of woodland on the air even appears to exceed that due to proximity to the sea.

At the time of the invasion of India by Alexander the Great, it is related by McCrindle concerning the march from the Jhelum, *vid* Lahore, to the Sutlej, that "the forests there extended over an almost boundless tract of country, and abounded with umbrageous trees of stateliest growth, that rose to

an extraordinary height." Further, it was stated that the climate was salubrious, for the dense shade mitigated the violence of the heat, and copious springs supplied the land with abundance of water. These are conditions which have long since passed away, with the destruction of the stately forests.

Failing meteorological tests that might be considered satisfactory by the Meteorological Department, the inhabitants of Etawah in the North-West Provinces state that, within five years of the establishment of a fuel and fodder reserve of 4,375 acres, or 6¾ square miles, on land near that station which was nothing more than bare ravine in 1887, not only are the now wooded and grass-covered ravines very much cooler than the former bare spaces, but the station itself is no longer so hot as previously to the plantations being formed. At Jhansi, also, a similar experience has followed the banding of the streams and the planting of the slopes with trees.

Forests and soil temperature.

2. *The Influence of Forests on Soil Temperature* is of considerable importance, especially with regard to the soil-moisture. European observations have made it clear that at all depths of observation extending to 4 feet) the soil in the forest is cooler than that in the open, and that the differences are greatest in summer, about the mean in spring and autumn, and very small in winter. In a country like India, where the heat is fierce till the S.-W monsoon rains come, this reduction of the soil-temperature over large areas by means of forest growth must have a very decidedly beneficial effect. Even in Southern Germany, the difference between the maxima of soil-temperature in forests and in the open has been found to extend up to 14° Fahr. The greatest equalising influence will, of course, be exercised by evergreen species of trees, and more particularly by such as are densely foliaged.

Forest and humidity.

3. *The Influence of Forests on the degree of Atmospheric Humidity.* Despite the fact of enormous quantities of water being transpired through the foliage of trees, more especially during the hot season of the year, when vegetation is most energetic, the air in forests cannot be proved to possess any greater absolute humidity than is noticeable in the open. This lack of any characteristic absolute humidity is easily explained, however, by the rapid convection and mixture of gases, and by the great rapidity with which they usually spread from the point where they are produced. But, while the absolute humidity depends only on the amount of water vapour that can be proved to be in the air, the relative humidity depends partly on this and partly also on the temperature. And, as the temperature of the air within the wood is less than that in the open, the power of

woodland air to retain a maximum quantity of aqueous vapour becomes decreased, *i.e.*, the relative humidity of the woodland air is greater than that of air in the open. The results of German experiments show that the mean annual relative humidity of woodland air is from 3 ½ to 10 per cent. greater than that of air in the open, but that the difference varies greatly according to the season of the year and according to the nature of the forests. Throughout India, the differences will of course be greatest in the hot spring months and in densely foliaged evergreen forests.

Seeing not only that the atmosphere within the forest is cooler than in the open, but also that the temperature of the trees themselves is lower, especially during the hot season, than that of the air surrounding them, it naturally follows that, when a current of air is wafted from the open into the forest and comes in contact with the cooler trees, its temperature is reduced, and it is brought nearer to the point of saturation,—or, in other words, its relative humidity is increased. But if the air in the open is at or near the saturation-point, then the effect of the cooling process is that a certain amount of surplus moisture, beyond the aqueous vapour that can be held in the air up to the point of saturation at its reduced temperature, must be released and precipitated in the form of dew. Hence forests act as condensers of atmospheric moisture, and decrease the absolute humidity of the air, whilst increasing its relative humidity, as well as by adding to the humidity by means of the large volumes of water transpired through the foliage during the processes of assimilation of carbon from the atmosphere and of elaboration of the sap.

Forests and rainfall.

4. *The Influence of Forests on Rainfall.* Endeavours made to establish any direct effect of forests with regard to the precipitation of aqueous vapour in the form of dew or rainfall have often been so conflicting in their nature that, up to the present, no safe deductions can be drawn. As air cools in rising, and therefore increases in relative humidity, it gradually approaches the point at which it must precipitate some of the aqueous vapour held by it. Hence, rainfall generally increases with the height of a locality above the sea-level, although no direct proportional increase can be proved. Corrections of so many different kinds have to be made, however, that the collection of reliable data, for comparison with readings made elsewhere, is a work of extreme difficulty. The mean statistics of readings made at 192 points of observation in Germany, corrected as carefully as possible with reference to these causes of difference, seem capable of yielding no sound general inference, except that at high altitudes large extents of forests may considerably

increase the local rainfall. As regards the quantity of rainfall and snowfall which is intercepted in forests by the leaves, branches and stems of the trees, the observations made in Switzerland, Prussia, and Bavaria prove that nearly one-fourth of all the precipitation of aqueous vapour is intercepted by the forest-trees, and is given off again by evaporation, or is gradually conducted down the stems to the soil. In lofty forest-clad regions the mechanical action of the rains on the surface-soil is thus very much modified. But, beyond the general assertion that, owing to their lower temperature, their greater relative humidity, and the mechanical obstruction they offer to the movements of currents of air, extensive forests must act decidedly as condensers of the aqueous vapour contained in the atmosphere, it would be unsafe to hazard detailed information. Their influence in this respect, however, is necessarily more marked at high altitudes and in mountainous tracts than on plains near the sea-coast, where other physical factors come into competition with and modify it. Hence, although the generally accepted opinion is that in the vicinity of extensive forests rainfall is greater than in other localities under otherwise similar physical conditions, it has not yet been determined with anything like certainty that forests directly cause any increase of precipitation, irrespective of such local considerations as elevation, the ruling direction of winds, and the special peculiarities of situation and configuration.

It is easy to show that in general throughout India densely wooded districts like the Western Ghâts, the hill-ranges flanking the Brahmaputra Valley, and the hills of Chittagong and Burma, have a heavy rainfall, as compared with other similar districts without forests; but it might perhaps be easier to prove that the forests exist because of the rainfall than to demonstrate the reverse, for there is every reason to believe that, other conditions being favourable, increased rainfall produces a more luxuriant growth of trees. The actual scientific facts available are open to one or both of two classes of objections; for, *firstly*, the character of the data for the beginning of the comparison is not above suspicion; and, *secondly*, recorded observations may be influenced by the so-called secular changes in the rainfall, due to reasons not yet within our knowledge. This question is, however, of such vast economic importance to India, that it deserves more than a mere passing notice here; for the request of the Court of Directors, in their Despatch No. 21 of 7th July 1847, that the Government of India should ascertain the "*effect of trees on the climate and productiveness of a country, and the results of extensive clearances of timber*" has never yet been acceded to in anything like a complete and unquestionable manner. Even then, however,

it seemed to the Court to be clearly deducible from previous researches and observations on the subject that an abundance of woodlands increased moisture, and that an insufficiency produced aridity.

About ten years ago Dr. Woeikoff, in his great work on climates, contended that the action of forests is to increase the rainfall of a country, and appealed to the registers of the Indian rainfall as emphatic evidence in support of this assertion, more especially to the Assam rainfall in the densely wooded tracts, as compared with that in the vast agricultural plain of Lower Bengal, stretching southwards from the Terai. Without denying, or even questioning, the effect of forests *as one element of the result*, Mr. Blandford, the head of the Indian Meteorological Department, who of course enjoyed the best possible opportunities for testing and criticising the facts and arguments adduced, in 1887 (*Indian Meteorological Memoirs*, Vol. III, Part II, pp. 135-145), arrived at the opinion that the conclusions formulated were far too sweeping. He agreed, however, with Dr. Woeikoff that forests have a two-fold action in tending to increase the rainfall ; for,—

> "Firstly, they help to store the water by protecting the soil and so keep up a constant evaporation ; and, secondly, by checking and obstructing the movement of the wind, they prevent the evaporated vapour being carried away, and tend to produce that calm state of the atmosphere that is favourable to ascending currents and local precipitation."

But the prevalence of swamps and of broad river channels must considerably increase the quantity of water vapour locally in the air ; whilst the comparative stagnation of the atmosphere in the Assam valleys, and the exclusion of the dry westerly winds that exert powerful influence on the rainfall of the great Gangetic plain, are due far more to the direction of the hill-ranges than to the modifying action of broad belts of forest. Again, the action of the surrounding hills, by inducing a diurnal current of humid air, and consequently cooling and precipitating this, is a powerful factor in the production of the heavy spring-rainfall of Assam.

Mr. Blandford, in emphasizing the difficulty of disentangling the combined effects of the various causes, sometimes favouring, and at other times interfering with, the production of rain, which render it almost hopeless to seek for decisive evidence of the influence of forests on rainfall by comparison of the rainfall of different provinces, or of areas sufficiently large to display the contrasted effects in a striking and convincing manner, stated that —

> "The best, and perhaps only satisfactory kind of evidence, were it obtainable, would be the comparison of the rainfall of one and the same

tract (one of at least some hundreds of square miles in extent) for many years; first while covered with forest, and again for many years after clearing. It is, however, not until a tract of virgin forest has been brought under the destructive operation of civilizing agencies that, as a general rule, any attempt is made to record its rainfall; when, therefore, the conditions necessary to obtain one term of the comparison are rapidly disappearing. The reversal of this order of things, the conversion of bare, or at least partially wasted, tracts into protected forest, is one, however, of which India already furnishes some examples, and with progress of forest protection may yet furnish more; and if due advantage be taken of these as they present themselves, it may yet be possible to obtain rainfall data which may afford valuable, and, indeed, practically conclusive, evidence on the point in question; even if not fulfilling, in all respects, the rigorous conditions of the logical method of differences."

A practical example of direct increase in rainfall owing to the stoppage of the destruction of forest was quoted by Mr. Blandford in the Annual Report of the Meteorological Department for 1885-86. It referred to the observations recorded at seven stations in the Central Provinces between 1865, or 1867, and 1885, in the tract where *Dahya* or shifting cultivation was gradually restricted with effect from 1875. This shifting cultivation was up till then practised in a totally uncontrolled manner by about 180,000 families, representing a population of nearly 1,000,000, who were induced to abandon this wasteful practice and to settle down to permanent cultivation on the plains, on receiving advances of plough-cattle, &c. It involved the cutting, the burning, and the total destruction of about 1,200 square miles annually; and at least 4 to 5 times that area, or between 5,000 and 6,000 square miles, were consequently always kept more or less denuded of forest growth, whilst the forestal character of the vegetation was very prejudicially influenced throughout more than 60,000 square miles cut over before the rotation brought back the operations to the same area. Along with the prohibition of *Dahya*, fire-protection, which had risen from 23,680 acres in 1865-66 to 174,357 acres in 1874-75, was gradually increased from 383,419 acres in 1875-76 to 917,951 acres in 1884-85, and was attended with very favourable results. Within that part of the Central Provinces lying between the Nerbudda river and the plains of Nagpur and Raipur, and including the Satpura hills, the protection of the forests against fire had been particularly successful over a series of years, so that a comparison of the rainfall statistics appeared to be of special and peculiar value. Eliminating probable errors from these, so far as possible, Mr. Blandford arrived at the results that, collating the reading at 14 stations within the affected areas, the annual average increase in the rainfall from 1876 to 1885 amounted to 6·81 inches over the annual average shown from 1865-67 to 1875. Not only was an increase during the last 10 years noticeable, but this was especially great during the

last period of 5 years. Unfortunately, however, it was subsequently found that the rainfall records previous to 1883 could not be accepted as altogether reliable; hence what seemed to be a great step towards a satisfactory solution of the great problem relating to the direct effect of forests on rainfall throughout India, must again be postponed for many years to come.

Meteorological observations for the purpose of elucidating the same question were also begun in the Ajmere forests in 1884-85; but, up to date, the results obtained have not proved of a sufficiently scientific nature to warrant their adoption as correct by the Meteorological Department. Observations have also been made by the Forest Department in the Dehra Dún forests since 1885, but they have not yet been subjected to the criticism and testing of the Meteorological Department.

The most recent scientific opinion for India is that stated by Mr. Eliot on pp., 26-27 of his *Report on the Administration of the Meteorological Department* for 1893-94, which runs as follows:—

"*Meteorological Observations in Forests.* Observations continue to be taken in certain forest areas in order to throw light on the influence of forest growth in modifying the distribution and amount of rainfall. Regular observations have been taken during the past year in the following forests:—

| Forest area. | Observatory. | Class of observations recorded. |
|---|---|---|
| Baluchistan ... | Shebo Plantation .. | Complete meteorological observations at 8 A.M. daily. |
| Ajmere ... ... | Ajmere Forests ... | Complete meteorological observations at 10 A.M. and 4. P.M. daily. |
| | (Ajmere-Marwara) Forest Stations ... ... | Rainfall. |
| North-West Provinces | Dehra Forest School .. | Complete meteorological observations at 10 A.M. and 4 P.M. daily. |

"It appears to me very doubtful whether it is desirable to continue these observations. Experience, as well as theory, appears to indicate that any differences with regard to temperature, humidity, &c., due to forest growth, will very probably be small in amount; and their determination requires not only careful and accurate, but also intelligent observation, in order that these effects may be ascertained without intermixture with the unknown effects. There are two ways of investigating the question experimentally. The first would be to compare the actual meteorological conditions of a large open tract before it had been converted into a forest with the meteorological conditions in the same area after it had been planted out as a forest and had attained to full growth. As, however, it requires at least 20 years' observations

in order to ascertain with approximate accuracy the mean or normal meteorological conditions of any large area in India, it is evident that this method of procedure would not only require very special arrangements which are not likely to be forthcoming in India, but would also demand a period of at least 60 years for its complete working out.

"The second method, and that at present employed in the case of the Ajmere Forest Observatories, is to compare the actual conditions within the forest and just outside. This is effected by having pairs of observations, one of each pair being situated three or four miles within the forest fence, and the second outside the forest at a distance of about a mile. The sites for the observatories are chosen, so far as possible, so that the only apparent difference is that of forest growth, the effect of which it is desired to ascertain. Experience in India, however, shows that it is by no means easy to select sites for observatories the conditions of which shall give the same results. It is well known, for example, that the rainfall differs considerably in amount in different parts of large towns like Calcutta or Bombay. The same is equally true for temperature. The following will illustrate this fully. It was necessary to remove the Lahore Observatory from one part of that station to another part about two miles distant. The two sites do not differ by more than a few feet in elevation, and the exposure was as nearly as possible identical in the two positions. The following table gives the mean monthly differences of the day and night temperatures as determined from two years' comparative observations :—

| | | Jan. | Feb. | Mar. | Apr. | May. | June. | July. | Augt. | Sept | Octr. | Novr | Decr. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean .. | 1st Site .. | 64·1 | 68·4 | 81·5 | 92 8 | 96·5 | 104·8 | 97 8 | 97·9 | 99·7 | 93·3 | 84 0 | 72 0 |
| Maximum | 2nd Site .. | 63 7 | 68·1 | 81·0 | 92·9 | 95·0 | 104·1 | 97 8 | 97·6 | 99·5 | 93·4 | 83·7 | 71·5 |
| | Difference | +0·4 | +0·3 | +0 5 | −0·1 | +0·0 | +0·7 | 0 | +0·3 | +0·2 | −0·1 | +0·3 | +0 5 |
| Mean .. | 1st Site . | 45·5 | 44 2 | 57·2 | 65·8 | 71 1 | 73 9 | 80·6 | 80·0 | 75·2 | 63·0 | 51·1 | 45 2 |
| Minimum | 2nd Site .. | 43·6 | 41·7 | 55·2 | 62 9 | 69 1 | 78·3 | 79·8 | 79·4 | 73·3 | 60·8 | 48 4 | 42·9 |
| | Difference | +1·9 | +2·5 | +2·0 | +2·9 | +2·0 | +1 6 | +0 8 | +0 6 | +1·9 | +2·2 | +2·7 | +2·3 |

"Mr. Murray submitted his report on the observations taken in the Ajmere forest tract in January 1893. He found that they were vitiated with numerous errors, which were in part due to the adoption of incorrect methods of observation, and in part to carelessness on the part of the observers. Mr. Murray rejected all the observations that were certainly or probably erroneous, and tabulated and discussed the remaining observations. He found that there were slight differences of temperature and humidity between the inside and outside of the forest, which were in fair accordance with the results that have been obtained by systematic forest observation carried out in Germany and France. As the observations discussed by Mr. Murray had evidently not been taken with the precision and accuracy necessary to determine the small quantitative differences of temperature and humidity in question, it has been decided not to publish Mr. Murray's report. Mr Murray also at the same time submitted proposals for the improvement of the work of observation and for more frequent inspection of these observatories; and these have been recently sanctioned by the Government of India."

The position of the Meteorological Department of India in 1894 is, therefore, practically the same as it was in 1887, when

Mr. Blandford (*of. cit.*, page 144) wrote that—

"The general conclusion to be drawn from the facts set forth in the foregoing pages is that, while no instance cited fulfils the requirements of scientific proof, the tendency of the evidence they afford is uniformly favourable to the idea that the presence of forest increases the rainfall."

As Indian data are not available, it is necessary to look elsewhere for experience that can be applied to India; and, fortunately, what seems to be a very satisfactory example of the first method indicated by Mr. Eliot is obtainable from the records of the Prussian observatories under Dr. Müttrich with reference to Lintzel in the province of Hanover. The details are thus condensed and summarised by Fernow (*cp. cit.*, page 113):—

"This station, situated in the Luneburg heath, was begun to be planted to forest in 1877, at the rate at first of 1,000 to 1,5000 acres per year, afterwards more slowly, and by this time over 8,000 acres have been planted to forest in that locality. Around the meteorological station a young forest of 10 to 12 years old, of pine and oak, has grown up. The station is placed in an open field of about 75 acres extent, surrounded by the forest growth. The change of conditions immediately around the station Lintzel, making Lintzel central for an area of about 25 square miles, is represented as follows:—

| Before reforestation. | After reforestation. |
|---|---|
| 12 per cent. field, meadow, etc. | 10 per cent. field, meadow and water. |
| 85 per cent. heath. | 10 per cent. heath, roads and openings. |
| 3 per cent old forest. | 80 per cent. of forest. |

"There are now regular meteorological observations for nine years on hand.

"The rainfall observations are compared with those from stations outside of the forest conditions, but near enough to Lintzel to be available for comparison in the following table; the values having in both cases been equalized to eliminate irregularities by calculating the means of each three to four years by the formula $\frac{2a+b}{3}, \frac{a+2b+c}{4}, \frac{b+2c,+d}{4}$, etc.

TABLE I.—*Equalized values of precipitation in millimeters.*

| Year. | Lintzel. | Bremen. | Lintzel. | Hamburg. | Lintzel. | Oslebshausen. | Luneburg. | Gardelegen. |
|---|---|---|---|---|---|---|---|---|
| | *Per cent.* | *Per cent.* | *Per cent.* | *Per cent.* | *Per cent.* | *Per cent* | *Per cent.* | *Per cent* |
| 1882..... | 514. 7 | 797. 6 | 514. 7 | 643. 7 | 514. 7 | 673. 9 | 561. 0 | 534. 7 |
| 1888..... | 550. 5 | 798 8 | 550. 5 | 650. 9 | 550. 5 | 675. 6 | 575. 1 | 545. 0 |
| 1884..... | 639 3 | 821. 2 | 639. 3 | 651. 5 | 639 3 | 676. 3 | 619. 0 | 599. 3 |
| 1885..... | 620. 3 | 756. 2 | 620. 3 | 650. 2 | 620. 3 | 579. 3 | 588. 7 | 567. 9 |
| 1886..... | 533. 3 | 636. 0 | 533. 3 | 570. 9 | 533 3 | 496. 1 | 512. 4 | 467. 1 |
| 1887 . ... | 546. 3 | 568. 0 | 546 3 | 580. 1 | 540. 3 | 521. 2 | 530. 2 | 454. 4 |
| 1888 ..*. | 650. 0 | 608. 5 | 650. 0 | 706. 1 | 606. 3 | 578. 2 | 625. 2 | 504. 9 |
| 1889 ..... | 705. 0 | 665. 9 | 736. 2 | 781. 4 | ..... | ..... | ..... | .. ..... |
| 1890..... | 668. 0 | 657. 3 | ..... | . ..... . | ..... | ..... | ..... . ... | ..... |

"From this table the percentage of rainfall in Lintzel, as related to the rainfall of each of the other stations, is calculated as follows:—

TABLE 2.—*Rainfall at Lintzel calculated as percentage of rainfall at certain places.*

| Year. | Bremen. | Hamburg. | Oslebshausen. | Luneburg. | Gardelegen. |
|---|---|---|---|---|---|
| | *Per cent* | *Per cent* | *Per cent.* | *Per cent* | *Per cent.* |
| 1882.. | 64. 5 | 80. 0 | 76. 4 | 91. 7 | 96. 3 |
| 1883.. | 68. 7 | 84 6 | 81. 5 | 95. 7 | 101. 0 |
| 1884.. | 77. 8 | 93. 8 | 94. 5 | 103. 3 | 106 7 |
| 1885 . | 82. 0 | 95. 4 | 107. 1 | 105. 4 | 109. 2 |
| 1886.. | 83 9 | 93 4 | 107. 5 | 104. 1 | 114. 2 |
| 1887.. | 96. 2 | 94. 2 | 10; 8 | 103. 0 | 120. 2 |
| 1888.. | 106. 8 | 92. 1 | 104. 9 | 93. 8 | 120. 1 |
| 1889 . | 105. 9 | 94. 2 | | | |
| 1890.. | 101. 6 | | | | |

"The author concludes that if the increasing reforestation at Lintzel had no influence on the amount of rainfall, the figures for Lintzel should have been nearly in constant proportion to those for the other stations, while from the percentage table it appears that with reference to neighbouring stations the precipitation at Lintzel has increased with the increasing forest growth. The differences in the last years are not so apparent, because the values could not be properly equalized. It is, however, undoubtedly proved that at the beginning of observations the rainfall at Lintzel was less than at any of the neighbouring stations, and that subsequently it increased from year to year, until it was in excess of the other stations, except at Hamburg.

"Comparing the rainfall at Lintzel with that of the other stations, and calculating it as percentage of the mean rainfall of the latter, the following series is obtained:—

| | Per cent. |
|---|---|
| 1882.. | 81. 8 |
| 1883.. | 86 3 |
| 1884.. | 95. 2 |
| 1885 . | 99. 8 |
| 1886 | 100. 6 |
| 1887.. | 103. 7 |
| 1888.. | 103 9 |

"This constant increase, going hand in hand with the increase of forest cover in extent and height, leaves hardly any doubt as to the close relation of the two conditions."

Another more practical Indian example, though one that must of course fail to satisfy the calm and sceptical criticism of scientific meteorology, is that furnished by Mr. R. H. Elliot of Mysore and recorded by Dr. Voelcker in his *Report on the Improvement of Indian Agriculture*, 1893, page 30, in the following words:—

"Mr. Elliot, when in the Neilgherries in 1891, carefully examined, with the aid of Government officials, the Rain Records from 1870 to 1890. Previous to 1870 Ootacamund and its neighbourhood were nearly bare of trees, so much so that a photograph taken about that

time has no resemblance whatever to the now thickly-wooded station, the result of a large amount of planting both by Government and by private individuals. The returns show that, taking first the rainfall for the months of March, April and May (when the rains are purely local), there were during the five years, 1870-74, 121 rainy days in all, while in the same months of the five years 1886 90 (by which time the station had become fully wooded), there were no less than 147 rainy days. Also, the increase of rainfall for the e months during the period 1886 90, has been about three inches a year, a not inconsiderable difference, though, from an agricultural point of view, the distribution of rain over a greater number of days is more important than a mere increase of rainfall. Again, taking all the months of the year, except June, July and August (which are excluded, because the rains of this period are not local in origin, but are those of the southwest monsoon, and come from a distance), it was found that during the treeless period, 1870 74, there was a total of 374 rainly days only, whilst during the wooded period, 1886-90, there were 416 rainy days, Further than this, it was ascertained that the character of the rainfall had altered within late years, light and regular showers taking, to a great extent, the place of destructive occasional torrents. The agricultural importance of these facts is very great indeed."

Evidence of a somewhat similar nature might be adduced from the rainfall records of the Chunga Manga plantation, about 44 miles south of Lahore, forming a compact block of 20,242 acres, 9,196 of which are wooded, principally with planted sissoo *(Dalbergia Sissoo)*, whilst the remainder is under ordinary scrub. The plantation dates back to 1866-67, though little was done for three years; but the forest is now mature and is worked as coppice with a rotation of about 15 years. The evidence deducible from the rainfall records most distinctly favours the idea that the forest has increased the rainfall; but any scientific value which these might have, if accepted as thoroughly reliable observations, is hopelessly vitiated by the fact that the growth of the forest is stimulated by irrigation. The watering of the forest begins in April, and goes on more or less till September. Very little of it is ever irrigated a second time during the year; but the watering given consists of a good soaking with a depth of three or four feet of water. The ground to the east and south, except where two *rakhs* are touched, is all under cultivation and irrigated, the irrigation being mostly continued from June till April. A soaking of three or four feet deep of water over 9,196 acres, or 14¼ square miles, must, by evaporation, transpiration, &c., affect the humidity to such an extent as to make even the most trustworthy observations of small practical value for the solution of the great question at issue.

So far as meteorological knowledge and experience throughout different parts of the world have yet advanced, the conclusions that seem fairly deducible regarding the influence of forests upon precipitation are thus summarised by Fernow (*op. cit.*, page 125):—

"(1) Finding the air strata above forest stations moister and cooler

although only slightly so, than over field stations, we would infer that the tendency to condensation over wooded areas might be greater than over open fields. Experience and measurements seem to sustain this reasoning.

"(2) These cooler and relatively, as well as absolutely, moister air strata, carried away by air currents, must modify conditions near the forest, and possibly increase in its neighbourhood also the tendency to formation of dew and to other precipitation under certain conditions.

"(3) While the forest may not everywhere increase precipitation over its own area and near it, yet the presumption is that large systems of forest growth over extensive areas, alternating with open fields, may establish sufficient differences in temperature and moisture conditions and in air currents, to modify, if not in quantity yet in timely and local distribution, the fall.

"(4) It must not be overlooked that the extent, density, height, and composition and relative position of the forest, in making it a climatic factor are important conditions, and furthermore that there are certain rain conditions prevailing in climatic zones (rainy or rain-poor localities, with periodical, seasonal, or irregular rains) which are due to cosmic influences and cannot be altered, yet may be locally modified by forest cover. Hence, experience in one climatic zone, or under one set of conditions, cannot be utilized for deductions in another.

"(5) Altogether the question of appreciable forest influence upon precipitation must be considered as still unsolved, with some indications, however, of its existence under certain climatic and topographical conditions in the temperate zone, especially towards the end of winter and beginning of spring."

Forests and Evaporation.

5. *The Influence of Forests on Evaporation of Soil Moisture* is to retard the loss caused by sun and wind. The low temperature and the high relative humidity of the atmosphere in forests are unfavourable to rapid evaporation, which is still further reduced by the protection afforded to the soil against direct insolation and the action of winds. From observations extending over ten years (1876-85) in various parts of Germany and Austria, the following relation is shown between evaporation in the forests and in the open in the vicinity of the forests; the differences would probably be greater if comparison had been made with places in the open that were far removed from the modifying influence of the woodlands:—

| | Water evaporated. |
|---|---|
| | Inches. |
| In the open ... ... ... ... | 20.9 |
| In the forest ... ... ... .. | 9.5 |
| Lower in forest than in open by ... ... | 11.4 |
| | Per cent. |
| Evaporation in forest expressed in percentage of that in the open ... ... ... | 6 |

The action of forests, therefore, is to preserve within the soil, and against evaporation, a large proportion of the rainfall, or of the moisture arising from the melting of snows, which, by percolation to the lower layers and the subsoil, tends to feed the streams perennially, and to maintain a constant supply of moisture.

The nature of the soil-covering below the forest trees exerts also considerable influence on the amount of moisture evaporated. From experiments conducted during five years in Bavaria, it was found (Ebermayer's *Gesammte Lehre der Waldstreu*, 1876, p. 183) that a good layer of fallen leaves, and of *humus*, or vegetable mould, formed by their decay, diminishes the evaporation by more than half, or reduces it to less than one quarter of that in the open, and thus adds very considerably to the surplus amount of moisture retained in the soil.

In a tropical and subtropical Continent like India, the differences in evaporation between areas freely exposed to rain and wind, and those protected by forest growth, must of course be greater than in more temperate climes. Hence, wherever the rainfall is limited, or mainly confined to a short wet season, as in the densely populated and highly cultivated Indo-gangetic plain, the presence of forests must act beneficially. Their beneficial effect must also be enhanced with density of tree-growth or canopy; consequently, restriction of reckless fellings and protection against fire must also directly enhance the beneficial effects of the woodlands.

Forests and Streams.

6. *The Influence of Forests on the Feeding of Streams and on the Protection of the Soil.* From what has already been said, it seems evident that the effect of extensive forests, more especially of those situated at high altitudes, is, by cooling the air and reducing its capacity for retaining aqueous vapour, to increase the precipitation. Whilst precipitations are taking place the crowns of the trees intercept a large proportion of the total, and, by breaking the violence of the rainfall, protect the soil from the danger of being washed away during heavy storms. By the decomposition of fallen leaves and twigs a strongly hygroscopic soil-covering is formed, capable of imbibing and retaining moisture with sponge-like capacity. Rapid evaporation of the soil-moisture is counteracted through the protection afforded by the foliage against direct insolation during the day, and by the mechanical hindrance offered to currents of wind. The crown of foliage likewise prevents the soil from cooling rapidly at night by radiation. And the hotter the climate, the more marked must be these beneficial effects of the woodlands.

When, therefore, large tracts of country are denuded of timber, increase of temperature during the days of the hot season,

rapid radiation of soil-warmth by night, diminished precipitations (especially in the hot season), and unchecked evaporation of moisture, due to complete insolation of the soil by day and absence of any protection from winds, must be the inevitable consequences.

Examples of such actual results can be pointed out in many parts of continental Europe, in Western and Central Asia, and thoughout India ; but these will be more appropriately referred to in considering the influence of forests on agriculture.

In India, however, as elsewhere in localities having no protective woodlands, experience has shown that heavy rains wash away the surface-soil ; torrents and freshets run down the water-courses with great violence, laden with detritus and discoloured with the soil held in mechanical solution ; whilst streams and rivers often overflow their banks in consequence, devastating large areas of low-lying tracts under cultivation. Forests, on the other hand, tend to break the violence of the rainfall, and (if in close canopy) retain for the time being about one-fourth of the total amount of a moderate shower on the foliage and branches ; the roots of the trees and of the undergrowth help to bind the soil firmly ; the rainfall is retained by the vegetable mould and by the spongy growth usually found on the surface-soil, and thence gradually percolates to the deeper layers, where it is held in reserve, to be finally parted with in being utilised for the feeding of perennial streams having their sources on the wooded slopes.

The influence of forests in diminishing floods in hilly countries has been most convincingly recognised in Europe, and in France extensive operations have been steadily progressing since 1860, under foresters and engineers, for controlling hill-torrents and planting up bare slopes throughout the Alps, the Pyrenees, and the mountains of Central France. Such operations may not be feasible in India on a scale anything like vast enough to control floods in the great rivers caused by the rapid melting of abnormally heavy falls of snow, or by unusually heavy rainfall ; but there can be no doubt that the prohibition of reckless fellings and a sound system of protection from fire must at any rate help to avert such disasters.

Take the Indus, for example, where floods of vast devastating power have occurred for the last two or three years with what may be more than mere fortuitous regularity. These may be, and in all probability are, correctly explained by more or less reliable evidence regarding abnormally heavy snowfall in the catchment area of the upper basin of that river ; but the following extract from the *Report on the Administration of the Forest Department* for 1870-71 (pages 8 and 9) is at any rate deserving

of a certain amount of attention :—

> "The Kashmir forests everywhere exhibit the most wasteful system of working. . . . The trees are felled in easy places wherever it is possible, without any reference to the protection of the remaining stocks, or to shelter for reproduction; forest fires are allowed to rage uncontrolled; and, with heavy demands on the market, these forests will in all probability soon be utterly ruined, so far as reproduction is concerned. . . . . Our own plains in the Punjab are watered by the rivers which flow from the Kashmir hills; and if the latter are denuded of timber, disastrous results will assuredly follow from time to time in the country below them, in the shape of alternate droughts and floods, results which have actually occurred in France on several occasions during the present century, owing to the denudation of trees on the Alps."

Despite this warning, it was not until 1891 that an officer of the Indian Forest Service was deputed to assume the administration of the forests of Kashmir; and the long continuance of reckless felling and want of other protection may quite possibly have had some influence on the water-retaining power of the hillsides and on the floods of recent years.

Throughout large portions both of Northern and of Southern India, agriculture depends either wholly or partially on irrigation with water led from rivers, wells, or tanks. Out of a total cultivated area of 199,500,000 acres in 1886, the irrigated areas may be classified in the following manner, from the data given in the *Statistical Atlas of India*, 1886 :—

| Irrigated by | Acres. | Proportion to total Irrigated Area. |
|---|---|---|
| Canals fed by snow and rain ... | 2,800,000 | About 10 per cent |
| ,, rain only ... | 5,100,000 | ,, 17 ,, |
| Water from wells ... ... ... | 12,900,000 | ,, 43 ,, |
| Water from Tanks and artificial Lakes ... ... ... ... | 9,000,000 | ,, 30 ,, |
| Total ... ... | 29,800,000 | ..... |

The first class of canals comprises those whose waters are derived from the Indus and the Ganges, the upper catchment areas of which receive both a heavy snowfall during winter and also the rains of the summer monsoon months. Of the second class of canals the most important are those tapping the rivers Sone and Mahanadi in Bengal, and the Godaveri, Kistna, and Cauvery in Madras, as well as a large number of smaller streams, all of which are chiefly fed by the summer monsoon rains falling in the hills of Central and Southern India. Irrigation by water from wells, which tap the subsoil moisture, due partly no doubt to percolation from rivers, but more probably

chiefly maintained by rainfall, is carried out on all the great plains of Northern and Southern India. Irrigation from tanks and artificial lakes is more especially characteristic of Madras, Rajputana, and Mysore, though also to be met with in Central India, the Gangetic Valley, and Western Bengal.

Leaving out of consideration the snow fed canals and the great majority of the wells which tap the ultimate underground reservoirs of water, it may safely be estimated that not less than 15 million acres, or fully 50 per cent. of the total irrigated area, is directly dependent upon rainfall for the maintenance of a perennial supply of water. Hence it is obvious that, the larger the proportion of the catchment areas of the streams and rivers that feed the canals which is kept cool and moist by forest growth, the more favourable and continuous will be the gradual flow of moisture throughout the soil. In very many cases, therefore, the attainment of this object is in itself of more than sufficient importance to justify, or even to necessitate, measures for the preservation and the improvement of the still existing remnants of the natural forests, for guarding against the denudation of hilly tracts by reckless felling or destructive shifting cultivation, for preserving and increasing the hygroscopicity of the soil by means of fire-protection, and for doing whatever is feasible for the wooding or re-wooding of hillsides and uplands that may now be bare, barren slopes, or for improving the density and the quality of the growth of the existing crops of trees or shrubs.

Open imperfectly stocked, and unprotected forests, where the dead leaves and the herbage are annually consumed by fire overrunning the area, have naturally only a diminished influence in protecting the soil, in preventing sudden floods and freshets, in regulating the flow of moisture within the soil, and in maintaining a perennial supply for the feeding of streams. But every grove and every clump of trees throughout the dry and the arid regions of India possesses a distinct value ; and in all save the most arid tracts mere protection from over-grazing, wasteful cutting, and firing, is sufficient to produce brushwood and grass, and sometimes even tree-forest, which all help to keep the soil cool and moist. The beneficial effect of preserving mere scrub jungle is very noticeable in some of the native States of Rajputana, where examples have been set in past times that are well worthy of imitation in many of the drier parts of British India.

The effect of fire-protection on the water-storing capacity of forests is deserving of attention. The first consequences of annually recurring jungle fires are bamboo forests, with scattered standard trees on the hills, and grass savannahs on the plains. The layer of dead, fallen leaves on the ground is

annually consumed, and with it any tendency towards the formation of *humus*, or vegetable mould, that would enrich the upper layer of the soil. The tendency towards the formation of humus in tropical fire-protected forests, and even in evergreen forests, is, however, slight compared with that in the woodlands of Europe, as the leaves and twigs soon crumble into dust during the hot season ; but the action of the decomposition of such organic matter must affect the hygroscopicity of the soil to a greater or less extent.

With the destruction of the dead foliage and twigs, much of the water-storing capacity of the soil is lost ; hence the bare, friable soil is apt to be washed down the hill-sides into the nearest streams and tends to produce silting. In the unprotected teak forests of Burma the soil over large areas is annually washed away, except where pieces of wood, small stones, &c., break the violence of the rainfall ; and after the rainy season these appear supported by little pillars of mud, whilst all around them the soil has been eroded to a depth of two or three inches This erosion of the soil, however, usually appears to cease when once the forests have been successfully protected from fire for some years.

Again, in the Mokka-Belin reserve, in the Tharrawaddy division of Burma, even with its hot western exposure and its silicious sandy soil, the effect of a few years of fire-protection was to produce perennial springs in places where the water-supply had always previously given out at the commencement of the hot season. So much is the storage of soil-moisture sometimes affected by successful fire-protection, that even the nature of the forest may show a tendency towards developing into a moister type, owing to the coolness of the soil, the abundance of the water available for transpiration, and the greater relative humidity of the atmosphere. Thus in the *Report on the Forest Administration of the Pegu Circle* (Burma) for 1892-93, page 6, it is stated with reference to this same forest that :—

> "Fire protection improves the general forest growth, and has a marked effect on the distribution of the water-supply; but it is not favourable to the natural reproduction of teak. The probable effect of continued fire-protection would be to increase the area of evergreen forest in which teak would not find a place if the forester trusted to natural reproduction alone."

Throughout the Alpine districts of Southern Europe the necessity for maintaining '*ban-forests*' as a protection against landslips, avalanches, &c., was early recognised ; and legal measures were long since adopted for safeguarding them, in order to protect the lower tracts from erosion of the soil when sodden with rainfall, or with melted snow. That protection of the still-existing woods on the Himalayas would help to prevent landslips is extremely probable ; but that such help would make

itself apparent in any very marked degree is equally improbable. The maintenance of forest would of course tend to diminish the action of forces like change in temperature and undermining by water; but, as the Himalayas are quite a young series of mountain ranges, from a geological point of view, they have still a great many steeply tilted strata to get rid of before they will have passed through their dramatic, or catastrophic, period, and will have settled down with the steadiness of older ranges like the Alps.

In North America the Forest Commission which was appointed in 1881 by the State of New Hampshire to enquire, among other matters relating to the forests, into "*the effect, if any, produced by the destruction of our forests upon our rainfall, and consequently upon our ponds and streams,*" and which took four years to collect evidence and formulate its opinions, reported, in 1885, as follows:—

> "On one point there is no division of opinion. It is not in the open ground, but beneath the trees, that the moisture and the snow accumulate, and are slowly and surely supplied to the springs and streams, which then have a perennial flow. Let the same ground be deprived of its shade, and this exposure to the sun hastens evaporation, and the rain and melting snow rapidly pass off through the water courses before any sufficient quantity can reach the permanent reservoirs under the surface. The snow on the exposed hillside may be swept off entirely by the wind; and even when any considerable portion remains, much will evaporate, and after all be lost to the soil and the springs. The soil itself is often washed off, and the exposed rocks are given over to perpetual barrenness."

The consideration of this phase of the influence of forests may well be concluded with the following extract from Brandis' *Progress of Forestry in India*, 1884, page 31:—

> "Whatever views may be held regarding the effect of forests in regulating the surface drainage, and in improving the water-supply in springs, rivers, tanks, and wells, there is no doubt that on hills clothed with forest the soil is protected, that less soil is washed away, and that less sand and silt are carried down by the rivers. There is not a district in the moister regions of India where the effects of denudation in this respect are not visible. The sand which is washed down from the denuded hills in the Hoshiarpur district of the Punjab has destroyed the fertility of large areas, and ravines and torrents are numerous in the more thickly inhabited portions of the Himalaya. Even in the Nilgiris the evil will be felt sooner or later, although these hills are favoured beyond any hill range in India by gentle slopes, deep soil, and a moderate rainfall; every year masses of fine silt, which, if retained, might be a source of wealth to the European planter as well as to the native cultivator, are washed down from them into the rivers. The Ratnagiri district on the western coast, south of Bombay, is almost bare to the crest of the ghâts, and the effect of denudation has shown itself by the silting up of the streams which rise in the ghât mountains, and run a short course to the sea; some of these rivers were formerly important for the trade of the country, but now they are only navigable for small boats. The benefits, direct and indirect, which the people of India will derive from forest conservancy, if continued in a systematic manner, can hardly be overrated."

The Hoshiarpur *chôs*, or sand-torrents, above referred to are,—owing to the fact that the hills, by the disintegration of which they have been formed, are largely composed of very friable and unproductive sandstone, extremely hard as soil, but not perfectly formed as stone,—one of the most marked examples of a barren tract in the midst of one of the rich agricultural regions of Northern India. Year by year, considerable additional areas run the risk of being covered with unproductive sand; and this not only means a loss of land revenue, but also involves the infinitely greater loss of culturable land to the community. Writing in 1879, the Deputy Commissioner of Hoshiarpur estimated that in one *tahsil* alone 35,000 acres of land were covered with sand brought down by the *chôs*, thus forfeiting fully Rs. 50,000 annually for land revenue. That these hills were once densely wooded can be not only sufficiently but even completely proved, as well as that destructive torrents did not then wash down the friable sand. Planting would remedy the evil, but under such difficult circumstances the remedy would be expensive.

Forests and Health.

7. *The Influence of Forests as regards Hygienic Effect on the Atmosphere* still remains in many respects an open question from a purely scientific point of view. It is well known that, on the one hand, when large tracts of forest are cleared for cultivation, especially in tropical and sub-tropical countries, fever and ague are frequently the consequence, and, on the other, that the planting up of notorious fever districts—such as the Campagna di Roma, the Tuscan marshes, and the Russian steppes—has decidedly diminished the insalubrity of these localities. But the causes are very probably due rather to the degree of direct insolation of the soil, freely afforded in the one case and counteracted in the other, than to any hygienic property inherent in tree-growth. In the latter case, too, stagnating surplus of soil-moisture may have been got rid of by transpiration through the foliage, and this would of itself go far towards removing causes of insalubrity and improving the climate.

It is generally accepted that ozone kills miasma in the air and purifies the latter—at any rate, impure air contains little or no ozone; the proportion of ozone is, therefore, usually taken as the measure of atmospheric quality.

Even presuming, however, that woodland air is, like sea-air, comparatively rich in ozone—which has not yet been satisfactorily proved,—it is more than probable that any excess over that of air in the open may be consumed by decomposing matter covering the soil, and that this process may even withdraw more than the surplusage of ozone from the atmosphere. Should this surmise be correct, then the withdrawal of ozone in

excessive quantities from the air by decomposing vegetable matter might easily account for the unhealthiness of tropical jungles and the prevalence of malaria at all the lower elevations within tropical and sub-tropical regions usually covered by woodland growth.

It has been claimed that forests tend to resist the spread of epidemics, and to offer a bar to the progress of diseases like cholera, typhus, yellow fever, and malaria, owing to the reduced temperature and moister soil being unfavourable to the growth of pathogenetic bacteria and of parasitic protozoa. Fortunately, there are not many infectious diseases the germs of which can be carried by water; as yet only two are known with certainty, cholera and enteric fever. When outbreaks of these diseases occur in tropical countries, the infectious power of the germs is favoured by warmth and moisture; moreover, when epidemic, these diseases usually break out in thickly populated towns and similar localities, where it is impossible to submit the soil-moisture or the water-supply to the filtrating action of broad belts of woodland. That malaria, whether originated by a fungus or by an animalcule, is less prevalent in the forests than in the open, is a statement that must be considered indefensible if judged by the light of the experience of forest officers in the tropical and subtropical forests throughout by far the greater part of India. Though it be true that sunlight has the power of decomposing carbonic acid in the presence of chlorophyll, the green colouring matter contained in the foliage of trees and other plants, the carbon being absorbed and assimilated by the plant for its growth, and the oxygen being set free, yet during the hours of darkness a contrary action takes place, oxygen being consumed and carbonic di-oxide being given off. As, however, and more especially within the tropics, the hours of sunlight only exceed those of darkness by a comparatively short time even during the longest days of May, June, July, and August, while they are actually of similarly shorter duration during the working season from November till May, and, seeing also the reason there is to believe that tropical woodland air may, as above indicated, be more deficient in ozone than air in the open, it is quite reasonable to suppose that a slight de-oxygenation of the human blood may often take place, and that in such cases the individuals will be more liable to become infected with the bacteria or hematozoon causing malarious fever. Vast, therefore, as the other benefits of forest conservancy and fire-protection undoubtedly are for the climate and the agricultural condition of India, it would be impossible to urge at the same time that these measures are conducive to the better health of those who live in the forests, or within their immediate influence.

Forests and Agriculture.

*The Influence of Forests as regards the Productivity of neighbouring Agricultural Tracts* opens up a question of the very first importance in a Continent like India, whose vast population is mainly dependent on the tillage of the soil. In considering a problem of such far-reaching consequence, it may be well to look first of all at the general experience of other countries, and then more carefully to inspect the circumstances of our Indian Empire.

Even so early as in Roman times, it was recognised that too great a clearance of woodland areas brought undesirable changes in the physical conditions of Italy, and affected the welfare of the inhabitants ; and modern experience has more than confirmed such facts.

Early in the present century, for example, the Agricultural Society of Marseilles reported, that, in consequence of the reckless destruction of the forests after the Revolution of 1789,—

> " The winters are colder, the summers hotter, and the beneficial spring and autumn showers no longer fall ; the Uveaune, flowing from east to west, rushes down in flood with the least rain, carrying away its banks and flooding the richest pasturage, while, for nine months of the year, its bed lies dry owing to the drying up of the streams."

To a similar cause also Professor Geffcken (*Speaker*, 5th January 1893) attributed the Russian famine of 1892, in the following terms :—

> " We speak of the deficit [in the Russian Budget] of 1893 as certain, and it is easy to show that it will be so. The principal cause of the present dearth is the drought during the last spring and early summer, and this absence of rain is greatly due to the devastation of the forests. The area formerly covered with timber was enormous, the woods belonging to the Crown, to the great landed proprietors, and to the village communities. But the means of transport were then so imperfect and costly that only in the neighbourhood of large rivers did the felling of timber pay. This changed with the construction of railways and the abolition of serfdom ; the former gave the possibility of selling with profit, and the peasants abandoned their woods to speculators for what they thought a good price, little thinking of the future ; the larger proprietors followed their example ; the purchase-money was spent in drink and luxurious living, and no one thought of replanting. Too late has the Government issued a law for the protection of forests. Such a devastation going on for twenty years not only exhausts a source of wealth, but has also other bad consequences. When the country is deprived of its trees, the earth is dried up and crumbles from the hills ; the water coming down from heaven cannot be kept back as is the case with the woods, which act as a sponge, but rushes in torrents into the rivers and disappears in the sea ; and the consequence is a gradual diminution of the fertility of the soil and the disappearing of numerous brooklets and small rivers, to help the larger ones show a low water mark, which proves prejudicial to the navigation."

This view was confirmed by the special correspondent of the *Times* (article *Through Famine-stricken Russia*, 18th April 1892), who wrote :—

> " I have now travelled over most of the famine-stricken provinces, and I have been struck by the sameness of the picture. Everywhere reckless extravagance meets the eye, the forests have been cut away wantonly, the rivers are neglected, the climate is ruined."

Such was also the opinion of Major Law, Commercial Attaché to the British Embassy at St. Petersburg, as expressed in his *Report on Agriculture in the South-Eastern Provinces of European Russia*, commented on in a leading article of the *Times* of 17th September 1892, from which the following is excerpted :—

> " It is said that this gigantic natural tillage farm—*i. e.*, ' the black-" soil ' region—was formerly hedged in by belts of forest, which served " the twofold purpose of sheltering it from the desert winds and of " increasing the humidity of the climate. It is certain that these " forests do not now exist, and that the black-soil country is often " scourged by devastating blasts from the steppe, and not infrequently " baked by prolonged droughts. The desert winds pile the snow " into drifts in winter, which become the source of destructive torrents " in the spring. In summer the same winds are so fierce and arid " that in the space of a few hours they wither the corn as it stands ; " while, when they are laden with sand, they smite the soil itself with " perpetual barrenness."

Indeed, all writers who have recently published views on this subject seem to agree as to the main causes of the recent Russian famine ; and the following extract from an exhaustive article on " *The Penury of Russia*," in the ' *Edinburgh Review*' for January 1893, may be said to contain a summary of the best opinions on the matter :—

> " There are two other factors which account for the prevailing distress—first, damages by fire . . . . . This is accounted for by the dryness of the climate in summer, the carelessness of the peasants, and the want of organisation for extinguishing fires, which are simply regarded as a calamity sent by God. But the dryness itself is the result of the second factor, the ruthless forest destruction which has been going on for a long time, and has had a serious effect in reducing the average rainfall. The belts of wood attracted and held the moisture, which was slowly distributed for the benefit of agriculture ; now in vast regions, as for instance, on the black-soil, there is hardly a tree to be seen, and the consequence is that the underground rivulets which nourished the soil have disappeared. The forests also broke the force of the fierce east desert winds. Now these winds, piercingly cold in winter and scorchingly hot in summer, burst with full fury on the great plains. In summer their blasts are capable of withering the corn in a few days, and with them come sand storms, which turn fertile land into permanent deserts. The unfortunate experiences of Central Asia, which once was a garden of fertility and now is a desert peopled by nomads only, are repeating themselves. In the province of Astrachan an area of 800 square miles is covered by drift sand ; in that of Stavropol whole villages have disappeared, and in 1885 soldiers had to be summoned to clear the sand from the houses. In the province of Tauris the sand now covers 150,000 dessjaetines (= 1·00925 hect.) ;

the same disastrous effects took place in the north, where, after the destruction of the forests in the provinces of Samara, Woronesh, and Tchernigow, hundreds of sandhills arose, which gradually covered the fertile land. A further consequence is that the rivers become shallower. In winter there is nothing to hold the snow, which is blown together into large heaps; these, with the thaw, dissolve into temporary torrents, washing away acres of tillage and carrying off all moisture before it has had time to soak into the soil. The river beds cannot contain all this water, and inundations occur; but when it has swept down, there is no further supply. The Woronesh, on which Peter the Great built his first ships, is now a mere rivulet; the Worskla, which fifteen years ago was a beautiful river, surrounded by woods and pastures, has absolutely disappeared; the Oka has become so shallow that barges coming from Nishegorod were stranded upon its sands. At Dorogobush the Dnjepr can be crossed by carriages; on the Dnjepr the navigation had to be stopped, as its depth was reduced to 2 or 3 feet; and even on the Volga steam navigation is interrupted in many parts, the river not being able to carry away the sandbanks; it is calculated that the volume of its water has decreased by 24,000,000 cubic metres. It is evident that even the most costly works for opening the channels will be of little avail; the cause lies in the devastations of the forests; the law by which the Government interdicted the ruthless fall of timber has come too late, and replanting is slow work, although it is the only remedy against the evil."

This is not merely a passing incident; it is the inauguration of a chronic condition of affairs mainly due to a general deforestation of the country, though also directly affected by unsystematic farming and by the withdrawal of capital from the land for investment in manufacturing enterprises. The inevitable consequences of this general deforestation are now making themselves felt in the shrinkage of what were formerly noble rivers, in the growing aridity of the climate, and in the ruination of agriculture. The great arteries of Russian trade, the Volga, Don, and Dnieper, which were formerly, like the Brahmaputra in Assam, fringed along all their middle and upper courses by wide-spreading forests, have been so completely denuded of their protective woodlands that only stumps and low scrub are now found, in place of lofty forest growth. The Volga grows shallower year by year; the Don, with its tributaries, is choked; the sources of the Dnieper are gradually falling lower and lower; whilst the Worskla, the chief tributary of the latter, which had a perennial flow of about 220 miles, is often dry from source to mouth. The city of Poltawa, where the Swedish army surrendered to Peter the Great, exists no longer, for its springs are exhausted and permanently dried up; whilst, in the surrounding district, wide fertile lands are buried under sand-drifts, and whole villages have been desolated. In addition to the drying up of the streams, the beneficial spring and summer rains are ceasing, so that famines are likely to be of frequent occurrence.

A vast revolution has, in fact, taken place in the previously existing natural conditions, and a great part of the country is now distinctly threatened with the heat and aridity of the Central Asian steppes. The conditions now obtaining involve what is practically a question of life and death to the agricultural population, which must gradually move towards more favoured areas leaving a desolation of barrenness behind them.

It is melancholy to think, when considering the above state of affairs, that the Government and the Russian nation were warned—just as Ernest Seyd, the economist, twenty-five years ago foretold the depreciation of silver and warned those concerned of the dangers looming in the near future. Shortly after the famine of 1847-49, the Charkowski Local Government addressed the Imperial Department of Economics to the following effect:—

> "There are now people living who remember when the present unlimited expanse of sandy waste skirting the Donez was covered with almost impenetrable forest, interspersed with lakes which have since dried up or are fast drying up. Our region is flat, deforested, and exposed to all winds. The dire east wind blows unchecked, and brings ruin in its train. This wind will, perhaps, at no distant date prove disastrous. The Grecian colonies were probably ruined from the same causes. Protect the forest. Plant forests; and protect them by rigorous laws. The Volga, the Don, and all the rivers of Southern Russia will be silted up and will disappear unless the forest be protected."

The forest laws of 1892, however, were issued too late, by at least twenty or twenty-five years, to avert the widespread destruction and devastation that has fallen upon the great black-soil agricultural region.

It would be vain and useless to speculate whether, or to what extent, similar causes have been operative in the prehistoric past to produce the desolation that reigns in many parts of the lower Indus valley, from Rajputana westwards, across Sind, into Baluchistan. It is sufficient to know what have been the undoubted effects of extensive clearances even under the temperate climate of Southern Russia, and to learn the lesson for the tropical and subtropical climates of India, that reckless deforestation either in British India or in the Native States threatens grave future danger to neighbouring agricultural tracts.

That the destruction of the ancient forests throughout Great Britain and Ireland, to such an extent that, including all ornamental plantations, only 3·8 per cent. of the total area can now be classified as woodlands, was not followed by such disastrous climatic changes as were occasioned by similar causes throughout Southern France and the Landes, Syria, Asia Minor, Greece, Russia, and probably also many parts of India, is entirely due to Britain's insular position, with its moist climate,

and to the happy effects wrought by that portion of the Gulf-stream which reaches her western and southern shores.

That the re-wooding of tracts previously denuded of forest will bring back the lost benefits, has been proved by practical experience.

In portions of the Russian steppes planted up nearly fifty years ago, the inhabitants assert that the summer rainfall has considerably increased, and that the danger to crops from drought is not so great as formerly, whilst the villages are also protected by the forest from the violence of the winter storms.

The first occasion on which the question of the national-economic influence of the forests of India was raised, appears to have been in a letter, dated 9th March 1846, written by Dr. Gibson, of the Bombay Medical Service, who was at that time Conservator of Forests in Bombay; and this letter seems to have been either the cause, or one of the causes, of the Court of Directors of the Honourable East India Company writing their Despatch No. 21 of 7th July, 1847, asking the Government of India to ascertain the "*effect of trees on the climate and productiveness of a country, and the results of extensive clearances of timber.*" In his letter Dr. Gibson stated that the clearing going on about 50 years ago in the Western Presidency would, at no distant period, be injurious to the fertility of the garden and rice lands in the vicinity, and, indeed, of the country generally, and would entail the further disadvantageous effect of a considerable increase in the mean annual temperature and in the aridity of the climate. He further stated that, since the South Konkan had been, to a great extent, denuded of forest, all the inhabitants concurred in asserting that the springs had given out on the uplands, the climate had become considerably drier, the seasons more uncertain, and the land less fertile. And he remarked that, whilst in Canara the humidity of the sea air soon caused the denuded hills to re-clothe themselves with a matted jungle of brushwood and small shrubs, the different climate of the upper country did not admit of such spontaneous efforts towards reproduction; for in the latter case, though green shoots might be produced from the stools of the felled trees, they either died off or else were cut away, and the hills remained bare.

On receipt of the Honourable Court's Despatch, the Government of India took immediate action, but the only reports made public were three from Madras. In these the more valuable evidence was mainly with reference to the drying up of springs on trees being cleared away, and to the subsequent perennial flow of water after once the forest had been allowed to grow up again—which are, of course, matters of great

importance in tracts where irrigation is often dependent on water-storage in tanks situated at the base of hill-sides. The reports from the Collectorates bore testimony to the rapidity with which the forests were being denuded, especially since the introduction of railways. The Collector of Canara denounced *kumri*, or shifting cultivation, as largely destructive of the forests, whose preservation he urged. In pointing out the injurious effects produced on the climate and on the fertility of the soil by the extensive clearance of a country, he recommended a declaration of the right of the Government to all forests which could not be clearly proved to be private property. The Collector of Trichinopoly drew attention to the fact that the cultivators of Torroire and Volcondahpoorum stated that the rainfall had decreased since the forests between the Cusbah village and the adjacent hills had been cleared, that the heat and wind were much increased, that the wells and tanks had not yielded the same water-supply as formerly, and that dry cultivation had consequently much increased.

In the meantime the state of the forest in India was attracting the attention of the scientific world, and the British Association for the Advancement of Science appointed a committee in 1851 to consider the probable effects, from the economical and physical points of view, of the destruction of tropical forests. The conclusions arrived at by this committee were evidenced by the report strongly urging the protection of Indian forests and the planting of trees. The benefits of tree-planting were well-known throughout many parts of India, even in ancient days; for among the Hindus the planting of groves, and the handing over of these to the community, were considered acts of special merit; whilst Asoka's monolith at Delhi records, among other matters, that the king caused wells to be dug, and trees planted, beside the public roads. When Sir Richard Temple was sent to the aid of the Madras Government, in consequence of the great famine in the South of India in 1877, he wrote as follows concerning the future of the Peninsula:—

> "We cannot but reflect whether the uncertainty of season, which often proves so disastrous in Southern India, is not becoming worse and worse; whether there may not be some physical causes at work to render the rainfall precarious; and whether such causes can be ascertained and obviated. It is hard to conceive a question more practically important than this. The discussion of it would be beyond the scope of this minute. But, connected with it, there is one particular matter which may be mentioned forcibly, though briefly. The Southern Peninsula of India has been, or is being, denuded, not only of its forests but also of its jungles, its groves, its brushwood, its trees. The denudation has been, as I understand, going on near the sources and in the upper courses of the many rivers which water the country. This, perhaps, is being in some degree checked. But with the progress of coffee

planting, and with the assertion of commercial rights on behalf of the people, the utmost vigilance will be needed to keep it within bounds. If it were to proceed unchecked, there would be imminent danger of the rivers running dry. . . . And as these rivers supply the great canal systems, this danger has only to be mentioned in order to be felt. The same argument applies in a lesser degree to the tanks or lakes, which are second only to the canals in usefulness for irrigation. It has already been seen how precarious is the question of these reservoirs, even with one year's drought. The progress of the country causes the price of timber and of firewood to rise. The introduction of railways has, in the absence of any coal mines, greatly augmented the demand for fuel. Strong temptations are thus inevitably offered to the people at large to fell, cut, and lop recklessly, to bring every log, stump, and stick to market, to dig out the very roots of the jungle, so stopping any chance of reproduction, without thought for the future. There are stories to be heard everywhere of groves and hedgerows, and scattered trees being cut for sale. In the midst of cultivated tracts, there are to be seen bare, sterile hill-sides, said to have been forest clad within living memory. In such localities the climate is supposed to have been changed for the worse. Beyond the ghât mountains, in Bellary and Kurnool, the treeless, shrubless aspect of the country is as wonderful as it is melancholy. These are the very districts where famine has been occasionally epidemic, and where scarcity has been almost endemic."

Intimately as this question must ever be connected with agriculture, it of course fell within the scope of the deliberations of the Indian Famine Commissioners, appointed by the Government of India on 16th May, 1878, who submitted their report on 7th July, 1880. But, considering the grave importance of the question, it is more than surprising to find that the whole of Chapter VI. Section II, *Forest Conservancy*, only occupies less than three pages (177-179), from which the following extracts, bearing more particularly on the points at issue, are taken :—

"The question of the influence which the denudation of forests may have upon the rainfall and on the subsequent retention of the rain-water in the soil, and its effect on the permanence of springs or flowing streams, is among those on which our opinion has been asked. Whether the presence or absence of forests has any direct effect in precipitating rain, is a much disputed point, which we shall not attempt to decide ; but there is before us a great amount of evidence from all parts of India that the destruction of forests is believed to have acted injuriously by allowing the rain-waters to run off too rapidly. They descend from the hill-sides in furious torrents, which carry down the soil, cause landslips, and form sandy deposits in the plains, so that the surface drainage, which, if gently and evenly distributed over an absorbent soil protected by vegetation, should furnish a perennial supply of fertilising springs, passes rapidly away, and the streams into which it collects quickly cease to flow, after causing mischief instead of good.

"It only gradually became apparent that it was requisite for the Government to interpose its authority for the preservation and systematic working of the forests, both to protect the country from serious injury through the improvident destruction of the timber, and to turn

to the best account the vast resources provided by nature in the shape of timber and other produce in demand for export or local consumption. The action of the State, which certainly was too long deferred, has everywhere been much hampered by the claims of private proprietors in forest-tracts, and by prescriptive rights of cultivating by destructive methods; but the Indian Forest Act of 1878 has at length given the Executive ample powers to arrest further waste and denudation, and to administer the forest resources to the greatest public advantage, while it ensures sufficient satisfaction for private rights. . .

"So far as any immediate advantage is to be sought from the extension of forest in respect to protection against drought, it will, in our opinion, be mainly in the direction of the judicious inclosure and protection of tracts. . . . . from which improved and more certain pasture may be secured for the cattle of the vicinity, a supply of firewood secured which may lead to a more general utilization of animal manure for agriculture, and a possible addition made to the power of the subsoil to retain its moisture, and to the prospect of maintaining the supply of water in the wells. In all cases existing communal rights of pasturage should receive careful attention, and, as far as possible, efforts should be made to extend facilities of this description, and to add to their value by a suitable system of protection As to the protection of the higher hill slopes from denudation, it may confidently be stated that they will, in any case, be more useful if kept clothed with wood than subjected to the wasteful and destructive process by which they are brought under partial and temporary cultivation, and that, whether the expectation of an improved water-supply as a consequence of such protection is fully realised or not, there is on other grounds sufficient reason for arranging for the conservation of such tracts where it is practicable."

This leaves out of consideration any detailed proofs of the lamentable consequences of deforestation in many parts of India. But an example, on a small scale, may be pointed to in the immediate vicinity of Simla. So late as 1868, or little more than 25 years ago, the hill range between Mashobra and Fagu was clothed by a fine forest of spruce, silver fir, blue pine, deodar, and oaks. After the occupation of Simla as the summer head-quarters of the Government of India, the forest was cleared for potato cultivation. Some fine crops were obtained, but soon the soil began to be washed down the hill-sides into the ravines; and now the fields have years ago disappeared, whilst the barren slopes are cut up by the dry, stony beds of alpine torrents. This and the previously cited case of the devastating sand-torrents of the Hoshiarpur *chôs* are merely specimens of the many examples that might be pointed to, throughout the Himalayas and the sub-Himalayan tracts, in which cause and effect have become plainly evident even so recently as during British rule in India. And the baneful results of similar action in more remote times are everywhere apparent to the discerning eye. The sand-drifts in the ceded districts of Madras, the consequences of indiscriminate cutting and over-grazing even in the comparatively well-wooded valley of Pallampet in the Cuddapah district, the compulsory aban-

donment of spice-gardens in the once cool and moist valleys of the Sirsi and Siddapur ranges in Kanara, and the effects of the denudation of the Western Ghâts in the Ratnagiri district, the Deccan highlands, and the Eastern Ghâts, all convey teachings and lessons that cannot possibly be ignored.

The consideration of a subject so intimately and so momentously connected with the agricultural productivity of British India naturally formed one of the duties of the agricultural expert, Dr. Voelcker, who was brought from Europe to assist and to advise the Government of India, and whose *Report on the Improvement of Indian Agriculture*, 1893, is a work of great practical and national economic value.

Concerning the general influence of forests on Indian agriculture, he wrote as follows (pp. 29-31):—

> "The beneficial influence of irrigation in dry tracts is obvious, but that resulting from the growing of trees needs some explanation. It has been much debated whether forests and plantations do actually bring about an increase of rainfall or not. But I would point out that their real influence and value consist in their *lowering the temperature* and thus causing moisture to be deposited where otherwise it would pass on. As a consequence of this, forest and plantations will cause rain to fall in gentle showers instead of in heavy and often destructive deluges. Thus, a given quantity of rain will be distributed over a greater number of days, and its value to the agriculturist will be thereby largely increased. The true test of the value of afforestation in this connection is not so much whether the *total* rainfall be increased, but whether the *number of rainy days* be more. The dewfall is also increased in the neighbourhood of trees, and this has considerable agricultural importance too.
>
> "It has not unfrequently been observed that in times of drought there has been plenty of rain in the clouds overhead; what was wanted was some agent to condense and 'bring it down.' Trees would materially assist in performing this. Again, the difference between the action of a gentle rain and that of a heavy deluge is very marked: for, while in the former case the water sinks gradually into the soil, in the latter it rapidly runs off the baked surface of the earth, and very often causes much damage by the destruction of roads, the washing away of bridges, and the silting up of tanks. . . . . .
>
> "But there are other indirect benefits attending the spread of tree-planting, benefits affecting the soil itself more particularly. What trees do is to hold up the soil, preventing it from being washed away and carried off by streamlets; next, a coating of vegetation soon covers the soil on which trees are growing, and binds it together, though, at the same time, rendering it permeable to and retentive of moisture, so that the rain no longer flows off, as it would over a hard dry surface, without benefiting the soil below. Thus, a cool surface is produced in place of an otherwise dry and heated one on which the sun's rays would impinge directly, and from which they would be reflected; shade and shelter are provided, and in the end a moister climate will prevail. From old records and descriptions of India there is reason to believe that the climate was not formerly what it now is, but that the

spread of cultivation, accompanied, as it has been, by the wholesale and reckless denudation of forests and wooded tracts, without reservation of land to afford good wood or grazing, has done much to render the climate what it now is. Sir William Denison states that, when Governor of Madras, he was shown districts in which the rain had retreated as the forests had been cleared back; and he points out that when a rain carrying cloud comes in contact with the bare and heated soil the tendency is for the moisture to be held up in suspension in the air, and not to be deposited on the earth. Such districts were found in Cuddapah, Madura, and Travancore. . .

"Though immense tracts of country have been denuded in the past, there are still considerable areas which can be taken up and rendered serviceable for climatic ends; and the Forest Department has stepped in none too early in the endeavour to save those wooded tracts which are still left. From climatic considerations alone, the work of the Forest Department is accordingly of importance."

Quite apart from any influence which forests may exert on climate and rainfall, their importance is manifest with regard to providing shade, shelter, and feeding for the cattle, without which agriculture would hardly be possible in India. And that the ill-effects of too rapid and too extensive clearance of the wooded areas, even in densely forested provinces, are directly noticeable with regard to the pastural capabilities of any tract, and the health of the animals grazed over it, as well as prejudicial in some respects to the crop-producing capacity of the land itself, can easily be proved. To quote only one example, in one of the Annual Reports of Mr. Frost, late Veterinary Adviser of the Local Government of Burma, it is expressly stated that the prevalence of certain cattle diseases in the Prome and Thayetmyo district was doubtless attributable to the too rapid and extensive clearance of forests; for this deprived the village cattle of shade and shelter, as well as of proper grazing during the hot season before the rain-bringing south-west monsoon breaks.

The great cause of famine in India in the past has undoubtedly been drought. And, even if the evidence be considered insufficient to warrant any comprehensive statement that a material deterioration of the climate has been the result of denudation of the forests in different parts of the Empire, or that the conservation and extension of the forests must materially increase the rainfall or regulate its distribution, yet there can be no doubt that their influence tends to equalise the distribution of the rainfall, and most probably also to increase it slightly, as well as to hinder the formation of destructive floods and to store up perennial supplies of soil-moisture for the feeding of streams and rivers. Again, whilst in the moist zones, and in the intermediate region between those and the dry zones, the country would not benefit if the total annual rainfall were to increase, it is certain that agriculture would

everywhere benefit largely if the formation and conservation of forests enabled the rainfall to be more equally distributed over all the seasons of the year. Even the drier districts of the Deccan, Mysore, Rajputana, Sind, and the Southern Punjab might maintain a large population in prosperity, if only the atmospheric moisture could be increased by means of afforestation.

But, besides drought, scarcity, amounting almost to famine may sometimes be caused by floods, or by excessive rainfall destroying the crops when it is too late to replant. And that, in such cases, forests have a special economic value, in addition to water-storing and distributive powers, proof is given by the following extracts from the Resolution of the Chief Commissioner of the Central Provinces published in January, 1895 on the scarcity in the Saugor and Damoh districts, at the extreme north of that territorial division during April to August, 1894:—

"It was reported to the Chief Commissioner in March last that the wheat crop in Saugor and Damoh had been destroyed by excessive rain, and that serious distress was apprehended.

"The result of inquiries showed that while the wheat crop occupied the same 60 per cent. of the cropped area in Saugor and 45 per cent. in Damoh, the outturn could not in either district be estimated at more than one anna in the rupee. . . . . .

"As regards the intensity and duration of the resulting scarcity, the view taken in the first instance by the local officers was a very gloomy one. They stated their belief that for, say, six months it would be necessary to provide work for some 100,000 people; that revenue would have to be suspended, if not remitted, and that an immediate Taccavi grant of five lakhs, to be supplemented later by further grants of 3 to 5 lakhs, would be essential if very serious suffering were to be prevented.

"After a careful consideration of all the facts, the Chief Commissioner came, however, from the first to the conclusion that the situation, serious though it undoubtedly was, was unlikely, unless the season should again prove unfavourable, to develope into actual famine, and that all that would be necessary was to relieve malguzars and tenants by liberal suspension of revenue; to afford help to the poorer classes by opening the forests; to open relief works for such of the poorer labourers and artizans as might need this assistance; and, finally, at a later period, to provide a sufficient sum in Taccavi to enable the demand for seed grain to be met. . . . . .

"To the labouring poor relief was afforded by opening the forests for the free collection of grass and fuel, and for the gathering of edible roots and fruits. In all times of partial scarcity the poorer classes in the affected districts are accustomed to resort in large numbers to the forests, and to eke out a scanty subsistence, not merely by collecting roots and fruits, but by the sale of fire-wood in the adjacent villages and towns. Nothing that was done for the relief of the people is said to have been more appreciated than the concession made in this respect, and the number who resorted to the forests and earned a living by selling wood and grass was very large. A further concession was made to the agricultural classes by permission to graze their cattle free of

cost in all Government forests, except in those tracts that are always closed to grazing.

"This was sanctioned, in the first instance, with effect from the 1st of June up to the 15th September; but it was subsequently found that a longer free period was desirable, and the time was extended to the 15th October.'

Distribution of Forests.

Very intimately connected with the agricultural and general national-economic importance of forests, is the question of their distribution throughout the Indian Empire. In the latest available returns it is shown that, up to 30th June 1893, the Reserved Forests, or State Reserves, amounted to 7·5 per cent. of the total area, whilst the Protected and Unclassed Forests under the more or less special supervision of the Forest Department amounted to other 6·5 per cent., making a total of 14 per cent. These data, however, convey no idea whatever of the total areas actually existing under forest, nor do they give any indication as to the distribution of the areas under the special control of the State, or of the sufficiency or insufficiency of the forests for local or general wants; and at the same time it is impossible to estimate from them the fiscal value, or the general or local importance, of the forest properties of the State in any particular province.

This 14 per cent. of the total area, either already demarcated, or presumably soon about to be demarcated with a view to being permanently retained under forest, partly for national-economic but more frequently for financial reasons, of course leaves out of all consideration many vast stretches of unreserved woodlands and bamboo-jungles still clothing the hill-sides in rocky tracts with poor soil, as well as large stretches on the richer plains in thinly populated provinces like Burma and Assam, that will ultimately fall under the plough for permanent, self-supporting cultivation.

But the bold statement of such percentage gives no indication whatever as to how far the existing reserves suffice for the maintenance of a prudent national-economic balance between the maximum of agricultural production and the safeguarding of the supplies of soil-moisture requisite for any agricultural success whatever. Even in a densely-wooded province like Burma, the mere percentage of woodland gives no reliable indication of the above nature; for though certain districts have far more than the absolutely necessary amount of forest, yet neighbouring districts are liable to suffer from insufficient harvests, and even from famine on a small scale, when the monsoon rains prove deficient, whilst the danger of damage from floods after heavy rainfall becomes at the same time enhanced.

Examining, for example, the conditions of Upper Burma,

of the total area of which no less than 35 per cent., or rather more than one-third, is already comprised within State Reserves, or Protected Forests, it will be found that the reserves formed, and the forests classed as protected, are those in which the most valuable tracts of teak and cutch exist, and that no areas have yet been selected in the dry region stretching from the south of the Mandalay district, through Meiktila, to the northern portion of the Yamethin district, where scarcity is not infrequent, and sometimes, as in 1891, practically amounts to a famine on a limited scale. In Lower Burma, again, the 6·5 per cent. of reserved forests are mostly confined to the Pegu Yoma, the hills to the west of the Irrawaddy, and the hills between the Sittang and the Salween. But, with the rapid clearance of forest on the plains now taking place for the spread of cultivation, this small percentage of permanent forest will be entirely inadequate to satisfy the requirements of agriculture; hence the setting apart of village forests should be pushed on as rapidly as possible, whilst the claims of Government to the land are still comparatively unburdened by rights of user springing up with increased population. Save for a few Fuel Reserves, mainly formed, for the benefit of the State Railways, the rich plains of the Tharrawaddy district in Lower Burma, which were covered by almost continuous forests when Pegu was annexed in 1852, are now one vast expanse of open ricefields, broken only here and there by small patches of forest owing their retention to the fact that they consist chiefly of teak, which was a royal tree, and the cutting of which was prohibited by Government. On the plains of the Pegu district the forests had long since been cleared in Talaing times; hence no patches of teak remained; and now the whole area between Rangoon and the mouth of the Sittang river is one huge expanse of rice-fields or elephant-grass without adequate shade and shelter for the village cattle during the hot season.

Again, in the Lower Provinces of Bengal, with its 8·5 per cent. of controlled forests, and its 3·8 per cent. of State Reserves, no less than 3,478 square miles, out of a total of 5,703, forming the latter, are in the Sundarbuns (2,092), and in the Chittagong Hill Tracts (1,386), whilst 2,260 square miles, or more than two-thirds of the protected forests, aggregating 3,071 square miles, are also in the Sundarbuns, and the whole of the 4,034 square miles ranking as "*Unclassed State Forests and Waste Lands*" are in the Chittagong Hill Tracts. Thus, of the total of 12,808 square miles of Reserved, Protected, and Unclassed Forests throughout Lower Bengal, 9,772 square miles, or more than three-quarters, are in the Sundarbuns or in the Chittagong Hill Tracts; hence, only as regard 2·0 per cent. of the remainder have any steps whatever been taken to acquire the land for maintenance as permanent State Reserves.

Though the Permanent Settlement of Bengal must interfere with the free action of Government with regard to the acquisition of an adequate percentage of the total area of the province for the formation of reserves to be maintained for the advantage of the Empire, and for the benefit of the population now and hereafter, yet no such restriction fetters the Local Governments of the other provinces in which the percentage of controlled forests is unquestionably smaller than prudential economic considerations would indicate, notably in the North-West Provinces, Punjab, Lower Burma, and Ajmere.

It is impossible to say in round numbers that 10, or 12, or 15, or 20 per cent. of the total area of every province should be under State Reserves; for the national-economic and agricultural requirements vary greatly in different provinces. But, even when the adequate percentage has been reserved, the best results will be attained only by a judicious distribution of the areas throughout the province according to the varying local requirements; and here the financial interests of the Revenue Department must inevitably often clash with those of the Department of Agriculture. Just as, however, agriculture is benefited most by forests through the tendency they produce towards an equalisation of the rainfall throughout the different seasons of the year, so also would the ideal in this respect be most nearly attained by having the protective forest areas distributed as equally as possible throughout the plains, whilst, at the same time, maintaining the bulk of the woodlands clothing the hills, as is the case in Burma.

Large and increasing as the revenue derived from the forests now is, and capable though it be of enormous expansion in a not at all remote future, there need be no hesitation in asserting that the chief end and aim of Forestry in British India ought to be the material progress of the country in its agricultural and general development. The first consequence of this acknowledged duty is that lands which are permanently culturable and suitable for self-supporting cultivation, or which may become adaptable thereto by irrigation, should not, save under exceptional circumstances, be ultimately included within the State Reserves. Where such lands have been enclosed within the boundaries of the existing Reserves, it may even be to the advantage of the community to have them thrown out of reservation and brought under cultivation, other areas being enclosed on poorer tracts. It is necessary, however, that such lands should be really fit for permanent, self-supporting cultivation; otherwise their exclusion from the State Reserves, for agricultural utilisation which would probably lead to loss of surface-soil and general deterioration, cannot possibly be a gain to the community in the long run.

Owing to local conditions of soil, situation, and climate, there are considerable tracts throughout India, which can hardly ever be expected to produce any good growth of timber trees, and which therefore seem better utilisable as grazing-grounds, or as village forests for the supply of fuel and fodder to the surrounding agricultural population; and such tracts should undoubtedly be formally dedicated to their true national-economic uses. Even among the barren wastes in many parts of British India large areas exist which have probably thus deteriorated under the direct influence of man, and which will serve their highest purpose if conservatively treated for the production of wood or grass.

Climatic, protective, and economic considerations alike demand the conservation of forests clothing the hill-sides and mountain-slopes, in the direct interests of agriculture, as well as for the general amenity and amelioration of the country; and even in the vast, thickly populated plains, the formation and maintenance of forests may have a very distinct national-economic value. Incomplete as the efforts of the undermanned Forest Department still admittedly are in this direction, much has been done wherever land still at the disposal of Government has been available for reservation and settlement; but this has not everywhere been the case. Large tracts of land, often including considerable areas of forest, are held by native landowners, like the zemindars under the Permanent Settlement in Lower Bengal, the talukdars of Oudh, and the malguzars of the Central Provinces. Though some of the forests included within these estates are conservatively managed, yet others are treated with very little regard to the advantage of the surrounding population or the requirements of the future; but any attempt on the part of Government to assume control over their management, or to lay down general principles for their working, as is the case in European countries like France, Germany, and Austria, would probably meet with an opposition such as only the hereditary *vis inertiæ* of India could produce.

The action of Government, so far as concerns its Forest Department, must therefore be mainly confined to lands at their disposal, although these are unfortunately often more or less burdened with privileges, or so-called rights of user, that have usually grown up without anything like a legal title; but the existing forest laws are somewhat unpractical with regard to the formation and settlement of village forests, the settlement and management of private woodlands, and the protection of all classes of forest not yet included within the categories of Reserved, Protected, or Unclassed Forests. Hence, even leaving the question of the control and management of private forests entirely out of consideration, the framing of new forest laws

may be advisable, and may directly lead to improvement in the conditions under which agriculture is practised, as well as being indirectly combined with national economic advantages to the general community throughout our great Indian Empire.

J. NISBET.

## ART. IV.—OMAR AND THE ALEXANDRIAN LIBRARY.

IN modern India the pundit and the moulvie are decidedly at a disadvantage. In schools and colleges, they are negligeable quantities, alike in the eyes of their colleagues and their pupils, except when the failure of boys in their vernacular examinations has to be accounted for. In politics they are no where—their opinion if ever valuable, is so only on such subjects as 'the sacredness of the cow' and 'the cow sacrifice'. In social matters, too, they are little in request save, of course, when they are clever enough to turn and twist particular passages in the Koran and the Vedas to fit in with modern lights, and thus bamboozle a people more impressed by antiquity than by reason.

Perhaps, this is partly their own fault. Their ancestors lived in times when the pundit and the moulvie were as fathers to their pupils, and teachers and gurus* to their half-literate rulers. So do their modern representatives, strangely oblivious of the fact that the disappearance of the old landmarks of their country's history is but the least of the achievements of the West, and Western thoughts and Western ideals have effected, and are effecting, a conquest more perfect, and hence more enduring, than that of Western arms and Western statecraft. Thus living in the past, they expect veneration for manners and modes that cannot command it, and their disappointment drives them into reserve and obscurity. Yet the imperious exigencies of being have to be faced. And to earn a bare livelihood, they are content to work, to make use of their learning, sometimes apathetically, sometimes grumblingly—amidst ridicule at times, and slights at others—but always without a forethought of what their labours may produce in the future. Thus it happens that their work lies hidden beneath the surface, that others get credit and profit for what they do, and do for a mere pittance; and though most of the research work in the languages of India is done by them, yet most of those who loom big on the Western horizon as *savants* and scholars, are only men who bear University hall-marks and are high in the councils of their rulers.

Yet there are pundits and pundits, as well as moulvies and moulvies. The exceptions to the rule of men, above sketched out—that is, those who are trying to attune themselves to their

* Spiritual guides.

altered surroundings and the prevalent modes of thinking—are, no doubt, still very small in number. But that is no reason whatsoever why their good work should not be acknowledged. On the contrary, this seems to me to be the greater reason why we should be ready to recognize their worth and accord to them their due.

It is in the interests of one such that this article is written. And he is Moulvie Shibli Nomani, Professor of Arabic at the Mahomedan Anglo-Oriental College at Aligarh—who, though a young man of scarcely 35 years of age, has done work, in the shape of researches into Arabic and Persian literatures, that is well nigh prodigious.

About two years ago Mr. Nomani delivered, under the auspices of his College, a lecture in Urdu, entitled "An Enquiry into the Destruction of the Ancient Alexandrian Library." This was most exhaustive, laying under contribution as it did every available source, whether in Mahomedan or European literature, and revealed an amount of erudition and patient, persistent work on the part of its author that was almost astonishing. As such, this latest and, as it seemed to me, most successful effort to settle a long disputed question, deserved to be rescued from the narrow and limited circle to which it was addressed. And so it was by an admirer of Mr. Nomani's at Hyderabad, in the Dekhan, by means of an English version of the 'Enquiry,' in March 1893. The translator was good enough to send me a copy and I read it with particular care and attention. So one may well conceive my surprise at reading the article on 'Omar and the Alexandrian Library' that appeared in the last October issue of the *Nineteenth Century*—the most impudent piece of plagiarism I have ever come across. The article is a faithful transcript of Mr. Nomani's 'Enquiry' in every important particular, and is original only in so far as, here and there, we have an amplification, in characteristic Baboo style, of Mr. Nomani's simple, unvarnished statement of facts and arguments, a few insignificant verbal alterations in the translations of Arabic authors, quotations from English sources which Mr. Nomani merely alludes to, and in that the article itself does not exhaust all the witnesses cited and arguments adduced in the 'Enquiry.' Of the morality of putting forth this as an independent contribution to the controversy about the destruction of the Alexandrian Library, I will not say a word—I will leave it to the readers of this Review to judge. But, by way of establishing the charge I have formulated above, as well as securing to Mr. Nomani that justice which is his due, and that recognition which he well deserves, I shall summarise here his 'Enquiry' as best I can.

"Calumniate him, still calumniate him: some dirt will stick," is a dictum about the origin of which there can be little doubt. Its intermingling of cynicism with a deep knowledge of human nature, could not have come from any other brain than Voltaire's. In spite of its cynicism, the truth—and hence the wisdom—of the French philosopher's advice does not seem to have been lost upon the makers—I mean, the authors—of European history, particularly of that portion of it which attempts to prove the superiority of Christianity and Christian enlightenment over other religions and other enlightenments. And no people have had to admit it, in pain and sorrow, more than the Mahomedans, for no people have suffered from calumny more than they. Other calumnies which form part and parcel of so-called history have been dealt with before. Some yet remain. And one of the worst of these is the calumny which ascribes to Omar the destruction of the Alexandrian Library.

If age could sanctify a prejudice and invest a fiction with the power of truth, this story of the destruction of the Alexandrian Library were a fact to-day which deserved implicit and universal acceptance as such. But it is not so, for time could not destroy all the evidences of truth; and truth itself is such that, for all the long periods of misrepresentation that may pass over it, conspiring to conceal it from public view, it still lives ready to be brought to light. At any rate, we can prove it to be the case as regards the alleged destruction of the Alexandrian Library.

"Since the dynasties of Abulpharagius have been given to the world," says Gibbon, "the tale (of the destruction of the Alexandrian Library by Omar) has been repeatedly transcribed" But all the European authors who have mentioned it, and thus helped to perpetuate it—and among them we count some big names—have done so, not on the authority of Abulpharagius alone, but also on that of Abdul Latif Bagdadee, Makreezi, and Haji Kalifa.

Professor de Sacy, in his Translation of, and Note on, Abdul Latif Bagdadee's book, says:—

"Of the objections raised against the statement of Abulpharagius, the strongest is, that the historians of Arabia are silent with respect to this important occurrence. But the strength of this objection is weakened by the evidence * of Abdul Latif and Makreezi."

Mr. Andrew Chrichton, in his 'History of Arabia, Ancient and Modern', writes:—

"If this circumstance were entirely dependent upon the

* Strangely enough, Professor de Sacy stultifies himself by saying further on, in the same connection, 'although it may be urged with sufficient cause, that Makreezi only copied this passage from Abdul Latif.'

evidence of a stranger (Abulpharagius, who wrote six hundred years after the event) then we must pause before accepting the statement of the Armenian historian. But it is not based upon his writings alone, for Makreezi and Abdul Latif, who have written histories of Egypt from the earliest times, also mention it."

Professor White, of Oxford, in his "Ægyptica," writes:—

"Against the negative arguments of Gibbon, we make bold to adduce the positive evidence of two Arabic historians, who are such accepted authorities that no objection can be taken to them. They are very enthusiastic followers of Islam. They are Abdul Latif and Makreezi, who not only agree in recording the circumstance of the burning of the library, but describe its whereabouts."

M. Langles, the celebrated French savant, Mr. Krell, of Germany, in his paper on the Alexandrian Library read at the Fourth Session of the Oriental Congress held at Florence in September 1878, and a host of other writers tell the same story in other words. To read them all and to remember that some at least of these are great in their line, one might be led to believe that the case against Omar was very strong indeed. But examine the witnesses they cite, read the evidence that some of these writers themselves produce in their pages; and the case falls verily like a house of cards. And that is what we propose to prove in the following pages.

Makreezi's history, printed in Egypt, is available. In Vol. I, on page 151, of this book, there is in sooth a passage referring to the Alexandrian Library under the heading of *Minaret of Savari*. But it is a transcript, word for word, from Abdul Latif Bagdadee. And this, M. Langles, one of those prejudiced against Omar's memory, is compelled to admit, having read Makreezi's book in the original Arabic. This circumstance reduces the number of independent Arabian authorities in favour of the European view of the destruction of the Alexandrian Library to two, *viz.*, Haji Kalifa and Abdul Latif Bagdadee, besides, of course, Abulpharagius. Let us examine these.

Haji Kalifa's words are quoted by Professor De Sacy, another adverse critic in these words:—

"In the early days of Islam, the Arabs confined themselves to the study of the revealed Law, and the sciences of Lexicography and Medicine. As such knowledge was of every-day use, it was studied by a few. The tenets of Islam not having taken a firm hold on the minds of the people, it was feared that the ancient sciences would interfere with popular beliefs, so much so that it is alleged that the books the Mahomedans found in the conquered countries were burnt by them."

In the above even the name of Alexandria does not occur. And the very burning of books found in conquered countries, is spoken of merely as an allegation, and is referred to by way of illstrating the inattention to the ancient sciences that prevailed in those days.

Now to Abdul Latif Bagdadee : His evidence against Omar is embodied in a few lines, to be found in a chapter devoted to the description of the Minaret of Savari, in his history of Egypt. And these lines run thus :—

" And I find that it is the same portico in which Aristotle, and his disciples after him, taught, that it was the Academy which Alexander established when he founded the city, and that in it was located the library which Amr Ibnul-A'as burnt, under the orders of Caliph Omar."

After quoting this passage, Mr. Krell—the same above spoken of as among the writers who father the destruction of the Library on Omar—remarks :—

" It does not appear to have been mentioned with any particular object, nor is it intended to remind us of any real occurrence. A well-known tradition is, however, mentioned, which the pilgrims of that time had given wide currency to ; and it belongs to that class of irresponsible and unreasonable stories which were current, during the Middle Ages, among the pilgrims with respect to Jerusalem." Apart from this, not one of the circumstances detailed by Abdul Latif in his description of the place, turns out to be true. And so one may well ask, as a correspondent did in the columns of the London *Spectator* some years ago : What truth can there be in the events he mentions as having occurred ?

And as for Abulpharagius himself, it is a remarkable fact that the destruction of the Alexandrian Library is not mentioned at all in his history, in the original Syrian, giving full particulars of the conquest of Alexandria, and that his abstract of this work in Arabic, entitled *Muktasarud-Dowal*, mentions the story for the first time. Mr. Krell's remarks in this connection are noteworthy. In the paper he read at the Oriental Congress at Florence, he says :—

" There are many things in it (the abstract) which are not found in the original Syrian. But it does not appear whether these additions are interpolations made after the death of Abulpharagius, or whether they were made by Abulpharagius himself, because all the editions are incomplete."

We have exposed the extremely unsatisfactory character of the evidence upon which the story of the Alexandrian Library by Omar is built up. Even if it were otherwise than we have shown it to be, we should still have a right to ask : Can these witnesses be considered reliable ?

Abulpharagius was born in 1226 A. D., that is, over six centuries after the alleged destruction of the Alexandrian Library. So, even if the interpolation in his Arabic abstract of his Syrian work may be accepted as his own, can the evidence of a man living six centuries after the event be received as convincing—particularly as it finds no mention in any writer before his time, Christian or Mahomedan? This was among the reasons which prevailed with Gibbon when he wrote in his 'Rise and Fall':—"For my part I am tempted to deny both the fact and its consequence."

Abdul Latif Bagdadee and Haji Kalifa came still later—the former having been born in 556 Hegira, and the latter having lived only two centuries ago. Besides, their credibility as historians needs to be established. Abdul Latif was undoubtedly a great professor of Medicine. Many of his works are still extant; and Ibni-Asceba, in his "Lives of Eminent Physicians," bears testimony to his vast knowledge of medicine. And Haji Kalifa is well-known for his "Bibliography of Mahomedan Authors." But nowhere have we come across a tittle of proof that they were independent investigators in the field of history.

So far, we have been concerned with the so-called evidence adduced by Europeans in favour of their belief. We shall now traverse wider ground, and show the utter absence of any evidence bearing on the point in the whole range of Mahomedan and Christian literatures from the Alexandrian conquest to the time of Abulpharagius—in histories and other books where, if the destruction were a fact, evidence of it would have been available—, as also the wholly improbable character of the act ascribed to Omar.

The written literature of the Mahomedans has a history dating from about 140 Hegira. And from that date up to the time of Abulpharagius, it is comprised in numerous histories, and compilations of histories, giving full accounts of the conquest of Alexandria and bibliographies of eminent persons—the most important of them being (1) *Conquest of Countries*, by Balazari, a contemporary of Caliph Al—Muthavakkil-Billa, (2) *History of Yakub*, by Ahmed-bin-Abi Yakub, a contemporary of Mamoon-ar-Rashid, (3) *History of Abu Hanifa*, (4) *History of Abu-Jafer Thabri*, (5) *History of Ibn-i-Aseer*, (6) *History of Ibn-i Khalidoun*, (7) *Husnul Mahazira*, by Seothi, and (8 and 9) *Biographies of Learned Men*, by Ibn-i-Asseba and Ibun-Nadim. But nowhere, in any of these books, is to be found even a distant allusion to the event. It may be said that the writers, being all Mahomedans, could not be expected to record evidence so damning to the reputation, for enlightenment, of Omar. This would presup-

pose the possession, by them, of enlightenment several centuries in advance of their time and strangely at variance with the spirit of bigotry that was, according to the European writers themselves, the characterestic of it. However, it would be safe to prove that even Christian historians of the period do not mention the event. Ensex, Patriarch of Alexandria, who died in 940 A. D., wrote a detailed account of the conquest of Alexandria. So also did Almacin, another zealous Christian, in his "History of Egypt" written about three centuries after the alleged occurrence, and about as long a period before Abulpharagius. But neither of them has any, the slightest, allusion to the destruction of the Alexandrian Library by Omar. Their silence, in the light of their early Christian zeal, is truly significant!

Let us now discuss the highly improbable character of the alleged occurrence. The first argument that counts against it, is the circumstance that there was no Alexandrian Library to be burnt at the time of the conquest of Alexandria by Omar. In a lecture on "Islam and Knowledge," delivered before the French Academy some years ago, and since printed in pamphlet form in Paris (in 1883,) M. Renan used these words: "Though it has often been alleged that Amr destroyed the Alexandrian Library, it is not true; for, it had been destroyed long before that." Dr. Draper writes to the same effect in his "Conflict between Religion and Science:" "Julius Cæsar had burnt more than half; the Patriarchs of Alexandria had not only permitted but superintended the dispersion of almost all the rest. Orosius expressly states he saw the empty cases or shelves of the library twenty years after Theophilus, the uncle of St. Cyril, had procured from the Emperor Theodosius a rescript for its destruction." And, referring to the alleged distribution of the books of the Library, among the baths of Alexandria for the purpose of being burnt, the Doctor quizzically remarks: "Of all articles of fuel, parchment is, perhaps, the most wretched. Paper and papyrus do excellently well as kindling materials, but we may be sure that the bath-men of Alexandria did not resort to parchment so long as they could find anything else, and of parchment a very large portion of these books was composed." The testimony of M. Sedilot Tom also, on this point, in his "Historie Generale Des Arabes," is unmistakable.

Other arguments, under this head, are furnished by an examination of the personal character and the general conduct towards the conquered populations of the man who is said to have destroyed the Library, as also of the circumstances attending the conquest of Alexandria by him. The

toleration and generosity with which Omar treated conquered peoples is proclaimed in every page of the history with which his name is associated. The hundreds of churches and idolatrous fire temples that continued to exist and flourish even after Omar's conquest, attest these traits of his mind and heart. Even if they did not, the very proclamation he got issued, while on his deathbed, would have served such a purpose, and well—the proclamation being in these terms :

"To him who shall be appointed Caliph after me, I hereby solemnly make these behests under instructions from the Prophet, *viz.*—(1) He shall carry out the agreements entered into with the protected people; (2) he shall fight for their protection against their enemies; and (3) he shall not impose more burdens upon them than what they can bear."

Was this the man who could issue a barbarous order such as is ascribed to him? Again, Amr, the direct instrument of the alleged destruction of the Library, was fond of learning and learned men, irrespective of their faith and nationality, as Abulpharagius himself admits. He was also a man of unbounded influence with Omar, as testified to by the fact that his invasion of Egypt was undertaken against the wishes of the Kalif, and he had his own way in the settlement of the terms granted to the conquered Egyptians. Look into the terms themselves. In 'his Conquest of Countries' Balazari says :—

"Amr conquered Alexandria with the help of the sword, and plundered the commissariat, but spared the people and did not massacre or imprison them, but guaranteed them protection."

The same thing is related in the works of Ibn-i-Aseer, Ibn-i-Khaldoun and others; and the terms agreed upon with the Egyptians were to this effect :—"Their lands and property will remain theirs, and no part thereof shall be molested." Was Amr, as pourtrayed here, the man, we ask again, who could carry out an order for burning the Library without a protest, and who, if he made a protest, could not secure it a hearing from Omar?

Further, let us peruse such evidence as the following. Writing to Omar immediately after the conquest of Alexandria, Amr says :—

"In this city there are four thousand baths, four thousand terraced houses, forty thousand Jewish tax-payers, four hundred royal places of recreation, and twelve thousand kitchen gardens."

No library is here mentioned. The emissaries of Haroun-ar-Rasheed, Mamoon-ar-Rasheed, and Al-Muthavakkil-Billa,

who scoured Syria, Palestine, Asia Minor, and Cyprus in search of philosophical and medical works, went to Alexandria also with a similar purpose. And one of them, Hunain-Bin-Isac, writes.—

"I travelled over the island of Cyprus, Syria, Palestine and all the cities of Egypt in search of Galenius' work, *Al Burhan*, and ultimately reached Alexandria, but I could find no trace of it. In Damascus only fragments of the work existed, and these too in an uncompiled form."

No mention of the library even here. And, last but not least, Ibnul-Bandi, a great Egyptian astronomer, bears unequivocal testimony to the way in which objects of antiquity were taken care of, and preserved by the Mahomedans in these words:—

"*Vazir* Abul-Kasim Ali-bin-Ahmed Furjani took charge of the library of Cairo in 435 Hegira, and issued orders to *Quazi* Abu Abdulla and Ibn-i-Khalkh Varraq to catalogue the books, and to bind those the covers of which had been spoilt. I visited the library in the company of these gentlemen to refer to the books I liked best. The works on Astronomy, Geometry and Philosophy alone amounted to 6,500 volumes. Here I saw the brazen globe which was used by Ptolemy Claudius. I wanted to ascertain its age, and found it to be 2,250 years old. I also found another globe of silver which Abul Hasan Sofi had made for Uzdud-Dowlah. It weighed 3,000 dirhams, and had been purchased for 3,000 dinars (about 15,000 Rs)."

And what is the conclusion we are driven to? That *Omar did not destroy the Alexandrian Library?* Or that *he did?* We leave it to the readers of this Review to answer this question.

HYDERABAD, DECCAN :
*February 1895.*

P. V. NAIDU.

---

## ART. V.—MAN AND WOMAN.

1.—*Man and Woman: "a Study in secondary sexual Characters."* By H. Ellis. Contemporary Science Series. W. Scott & Co. London 1894.

2.— *Woman's Share in primitive Culture.* By Otis T. Mason.

3.—*The Origin of Inventions—a Study of Industry among primitive Peoples.* By Otis T. Mason. (Contemporary Science Series.)

THAT certain constitutional differences between man and woman lie at the root of many important social questions, is a fact which admits of no disputing. What exactly these differences are, is, however, a matter upon which there is not much unanimity of opinion. In fact, in newspapers and magazines, one may see, almost daily, ignorant and reckless statements regarding it. Many will, therefore, hail with interest the appearance of a book in which the question is discussed with the sobriety and moderation with which such problems should always be approached. This Mr. Havelock Ellis has done in the volume lately published in the series of which he is editor-in-chief. The two other volumes here reviewed are by Mr. Otis T. Mason, the well-known ethnologist of New York. If less attention is paid in the following pages to the latter two works, it is because they deal with one part only of our subject; and, though very interesting from the light they throw upon the position of women in primitive times, they are not specially concerned with modern woman.

We purpose here to touch briefly upon the various questions treated by our authors in these books.

The position at present claimed and taken by women is a fact which must be accepted. We shall better see, when we have reviewed the *data* and conclusions in the works before us, whether this position is a sound and logical one, and therefore likely to endure, or whether it is founded upon a false physiological basis, and therefore likely to pass away as a mere fashion, or temporary current of thought. In the limited space at our disposal, it will not be possible to give all the facts and arguments in favour of particular propositions, and for fuller information the reader is referred to the books themselves.

Mr. Ellis begins by a description of the position of woman in primitive society, the subject with which the other two works chiefly deal. "A man hunts, spears fish, fights and sits about," said an Australian aborigine. This may be accepted as a fair statement of man's work in

primitive society. Among them the militant side belongs entirely to men, the industrial to women. Women invented and exercised multifarious household occupations and industries. "It was only when the position of a tribe became assured that men were able to lay down their arms, and take up and specialise woman's industries. In Mr. Mason's words "In the early history of art, language, social life and religion, women were the "industrial, elaborative, conservative half of society; all the "peaceful arts of to-day, were once woman's peculiar province. . . "Along the lines of industrialism she was the pioneer, inventor, "author and originator." The common opinion, favoured by some well-known writers on anthropology, that women were a source of weakness among savage races, and were consequently looked down upon as inferiors or slaves, is founded upon a misconception of actual facts. So far from this being the case, among many tribes, women occupied a high position and not seldom even joined their husbands and brothers in war. When, however, we turn to the highly-developed state of barbarism found in mediæval Europe, we find a change in woman's position. At this period the military element was predominant, this necessarily involving the predominance of men. Hence, when we examine old chronicles and romances, we find men everywhere the fighters and entirely absorbed in war. In the old epics of this age women are usually the wooers, the men being usually indifferent, notwithstanding which, when the woman became the wife, she came altogether into the power of her husband, who often treated her with great contempt. At the same time there existed the opposite and complementary tendency to glorify woman, and to regard her as the spiritual and refining element of life. Partly, it seemed, women were good to play with, partly to worship. The idea of woman's work did not fit into the mediæval theory.

It is not till we come to the eighteenth century in Europe that we find any real advancement in woman's status. At this period a new industrial regime began to emerge, and the introduction of machinery enabled man and woman to work side by side at similar occupations. How far this process of transition has proceeded at the present day, we all know. Social conditions being to a great extent equalised, we are brought face to face with the question as to the natural characters and predispositions which will always inevitably influence the sexual allotment of human activities.

Let us, therefore, turn to a brief consideration of these. From an inspection of the general characteristics of the male and female forms, three broad conclusions clearly emerge: *firstly*, that women are more precocious than men; *secondly*, that in women there is an earlier arrest of development; and, as a result

of these two facts, the proportions of women tend to approach those of small men and children. We cannot here stop to show how Mr. Ellis looks upon the child as the highest form of evolution and the type to which the human race is slowly approaching. Coming to details, Mr. Ellis shows that, in the increased expansion and development of the *pelvis*, women are more highly developed than men, and, in this respect, women are the natural leaders in the higher evolution of the species. As in the further development of our race the head seems destined to become larger, unless this is accompanied by a *pari passu* increase in the size of the female *pelvis*, evolution will become impossible.

As regards the skull, it is known that, among civilised races, at least, a woman's skull is easily distinguished from that of a man. The male skull has three special characteristics, *firstly* the prominence of the bony projection over the nose, the bony ridge for the eyebrows, and the larger air sinuses; *secondly*, the lesser prominence of certain "bosses" on the upper and outer part of the back of the head (as compared with those of women and children); *thirdly*, all muscular attachments are better marked in men, and their bones are usually thicker and stronger. Another, though less obvious distinction, may be added, that in women the top of the head is flatter and at a more marked angle with the forehead. As regards the "cephalic index," Topinard's opinion is not far from the truth, that among "longheaded" people, women tend to be less longheaded, and among "shortheaded" people, less shortheaded, thus approximating to the typical average of humanity. The face has hardly been sufficiently studied in this connection. Most observers, however, agree that in woman there is slight excess of protrusion of the upper jaw, as is also found in children. This, as Virchow has pointed out, is far from being a defect. It imparts a certain piquancy to a woman's face, and, while certainly not characteristic of high evolution, is distinctly charming. On the other hand, women do show a higher evolution in the relatively small weight of their lower jaws, even though their teeth are relatively and perhaps absolutely larger than those of men. It seems settled also that the back portion of the skull is somewhat larger in women while there is little or no difference in the frontal regions. This, too, is a result all in favour of women, for the old view that a large forehead is an indication of high mental capacity is, though a popular one, an idea devoid of any foundation, the truth being almost the exact opposite. On the whole, then, we have no valid ground for concluding, from an examination of the skull, that one sex is morphologically superior to the other.

Any consideration of the relative differences in the *brains* of

the two sexes must be approached with caution. "The "unscientific have a predilection for this subject, and men of "science seem to have lost the scientific spirit when they "approached the study of its seat." There is no doubt whatever that man's brain is weightier than that of women. But have men a *relatively* larger brain? This is the only important question. With relation to what are we to compare the brain? Relatively to stature, men have a distinct excess of brain, amounting to over an ounce; but, as men are not only taller but larger than women, this additional ounce is needed merely to place men upon an equality with them. Relatively to body weight, an obviously unstable element, women's brains are at least as large, if not larger, than men's. After eliminating all disturbing errors, Mr. Ellis has concluded that *women possess a relatively larger mass of brain tissue than men.* But this by no means implies any natural advantage. A relatively large brain not rooted in a good muscular foundation is not a gift of the gods. Epileptics possess often very large brains. It has been shown that, of the six largest brains on record, the largest of all belonged to a totally undistinguished person, the next to an imbecile, the third to Tourguenieff, the Russian novelist, the fourth to a labouring man, the fifth to a bricklayer, and the sixth to the illustrious Cuvier. Among distinguished men of action a small brain is quite as often found as a large one. It is clear, therefore, that, from our present knowledge, there is no recognisable scientific warrant for the introduction of such considerations in the settlement of questions of social and practical life.

We must pass rapidly over many chapters in this fascinating work. Observations on the sense of touch only go to show the fact that woman's hands are comparatively free from rough usage. Investigations have shown that there exists in men a markedly greater sensibility to pain, and the popular belief that women are better able to bear pain and discomfort has a good foundation. The sense of smell in women appears less strongly developed, whereas their sense of taste is more acute than man's. As regards the other senses, though it is agreed that deafness is more common among men, no definite opinion can be given as to the relative acuteness of hearing in healthy men and women. In regard to vision there appears to be little difference. It would seem that men are more liable to serious eye disease, women to minor disburbances of vision. Colour-blindness is, however, very much more common among men, seventeen times as common, says Mr. Nettleship. As far as the present writer's experience goes, colour-blindness is very rare among natives of India. This is in accordance with facts observed among

the less civilised races, where, though their colour vocabulary is very limited, they seldom fail to distinguish between minute shades of colour. I have often been struck with the ease and accuracy with which Indian prisoners employed on carpet-making distinguish between slight differences of shade. Not only is colour-blindness much less common among women; but, when it is found, it is usually in the milder forms. It will thus have been seen that there is little foundation for a popular belief which attributes to women a greater acuteness of sensory perception. The error has arisen from confusing sensibility with sense perception. At the most it may be said that men and women are equal in this respect. Mr. Ellis has some interesting remarks upon disvulnerability, a term, which has been used, to imply quick repair after injuries. It has been repeatedly observed that savage races show a greater recuperative power after severe accidents than people of more highly civilised races. Sir Wm. McCormac has borne testimony to the fortitude of the Turks in bearing severe illnesses and operations. My own experience in this country would seem to suggest that, of all races in Northern India, the Pathans, or Punjabi Mussalmans, make the best patients. One never see them downhearted or frightened at any illness, however severe. That this fortitude is partly due to their religious beliefs, is not improbable, as in the case of the Turks mentioned above, for the same bravery in the presence of illness is not to be noticed among even such fighting races as Sikhs and Gurkhas, though they, too, compare very favourably with the down country people, as, for example, Bengalis, in this respect. A similar recuperative power is noticed in children. Lombroso quotes the testimony of Billroth, the late great Surgeon of Vienna, that for all operations upon the abdomen women have a greater power of resistance and more chance of recovery than men. After all, this may only mean that women have, by their quieter and more sober lives, not "wooed the means of weakness and debility," as men too often do.

In muscular energy, however, there is no doubt that everywhere women show a lesser capacity. There is no form of vigorous action, except dancing, for which women show a greater aptitude than men. The following quotation from a French writer is interesting, touching as it does upon some minor points which, perhaps, are not universally recognised. "Women," he remarks, "preferably execute centri-"petal movements. Thus they give slaps and taps with the "palm of the hand, men with the back. According to my "observation, men make circumferential movements like the

"hands of a watch, women in the opposite direction. Again, "all women's garments, from chemise to mantle, button from "right to left, while men's garments button from left to "right. When a woman puts on a man's coat, she buttons "it with the left hand with a centripetal movement."

As regards manual dexterity many teachers with large experience of male and female students, in laboratory work for instance, are inclined to the opinion somewhat brusquely expressed by Carl Vogt, who wrote, "what makes laboratory work particularly difficult to women is—though one would hardly believe it—that they are often awkward and unskilful with their hands." In certain trades, too, where no muscular strength is required, as in cigar and cigarette-making, women, though employed in large numbers, are given an inferior class of work. In fact, except with regard to needle work, it cannot be said that woman is superior to man in any form of manual dexterity. In sense-judgment, however, women are probably superior; as money counters in America they are said to be much more expert. They can tell a bad banknote by feeling it, and a bank cashier will make fifty mistakes where they make one.

Certain experiments which have been made, go to show that woman's memory is superior to that of man. Women, too, are quicker readers than men. This, however, is no proof of intellectual power, as many distinguished persons have been slow readers. In a child's mind, for instance, every statement enters the mind unchallenged, whereas in adults each statement undergoes, as it were, an instinctive process of cross-examination before admission which delays mental action. The method of obtaining results by ruses, common among all weaker animals, is so habitual among women, that Lombroso has said it is "almost physiological." In their work on the Female Criminal (*La donna delinquente*) Lombroso and Ferrero discuss this trait. They trace it to seven causes which act chiefly upon women: (1) weakness, cunning and deception being the natural resort of the weak; (2) menstruation, leading as it does to concealment and simulation of other trivial maladies; (3) modesty; a woman is not allowed to speak of her love, but has to conceal it from its object; (4) sexual selection with a view to marriage; age, defects, disorders are concealed; (5) a desire to be interesting leads to simulation of weakness, &c., (6) the greater suggestibility of women; (7) their duties as mothers in teaching their children and giving false and specious explanations of facts which it is not considered right for a child to ask questions about or understand. To these Mr. Ellis would add compassion, or the desire to avoid hurting or shocking the feelings of

others. Caution and ruse are, however, by no means confined to the human female sex alone. They are found in all animals, and are rooted in the necessity of guarding the offspring.

About the ready wit of women there is no doubt; among the uncultivated classes the women are always the more intelligent. In mixed schools girls are usually found more precocious than boys. Precocity, however, is not of good augury for after intelligence, even though it is common among people of abnormal intellect, like men of genius. On this point both Herbert Spencer and Galton are very emphatic.* It is a fact to be borne in mind in these days of high pressure education.

With respect to the relative industrial and business capacities of the two sexes, the balance of the opinions of employers is against women. "They are more industrious, but less intelligent," says one. "They are absent from sickness twice as much," says another. There is no doubt that women employed in public places, as Post Offices for instance, are more docile and cheaper, and "they strike less." On the other hand, their productive power is inferior; they are oftener absent from slight indispositions, and they break down sooner under strain. At times of pressure they cannot compete with men; in ordinary routine work they are said to show less intelligence, and a lesser willingness to acquire technical knowledge:—the latter being, no doubt, partly due to the fact that many of them look upon earning their own living as a temporary expedient, to be put an end to by marriage. On the whole, therefore, from the employer's point of view, they are less useful than men.

In the realms of abstract thought, too, women show a greater docility. They are prone to accept authoritative statements and opinions more readily than men do. "Women take truth as they find it," said an old writer. In this case the influence of education must be remembered. This leads us to the relation of women to religion. What parts have women taken in the making of religions? In a list of some six hundred religious sects only seven have been founded by women, though everywhere they are the most devoted followers of all religions.

When we consider what Mr. Ellis has called "hypnotic phenomena," we find that there is no doubt that women fall more easily under this influence. By this expression is meant all those phenomena which are characterised by decreased control of the higher nervous centres, and increased activity of the lower. It is, indeed, probable that these phenomena could be elicited in every one, man or woman, who possesses a fair degree of mental health; but it is recognised

* Galton's "Hereditary Genius," Spencer's "Education."

that comparatively few men can be treated by hypnotism with any success. The allied states, ecstasy and trance, are certainly more common in women. Take, again, dreams; there is no doubt that women are greater dreamers than men. In women dreams usually remain frequent and vivid, while adult men usually find they come more rarely and less vividly. Professor Sidgwick states that he found that almost three times as many women as men had experienced hallucinations. A glance at the Proceedings of the Psychical Society, or a Mr. Podmore's recent little volume on "Thought Transference," will show the large part played by women in the elucidation of such problems.

In another but almost kindred respect women are found to differ considerably from men, that is in the ease and safety with which they undergo the action of anæsthetics. In this respect they resemble children and the less civilised races. In this connection a word may be added as to the wonderful safety with which chloroform is administered to natives of India. Nothing in the results of the recent Hyderabad Chloroform Commission excited more wonder in England than the almost absolute safety of chloroform in this country, as compared with the too common bad results of the same anæsthetic, even when used in the hands of highly-trained specialists, in the large European hospitals. It is not improbable that a high aerial temperature has some share in producing this satisfactory result.

In their liability to that group of symptoms of which the now fashionable name is neurasthenia; in the frequency of hysteria among them, women differ from men to their own disadvantage. In the strange history, too, of those semi-hysterical semi-insane phenomena known in many countries as "dancing" or "religious" manias, women have taken an active lead. This is usually and correctly explained by saying that women are more "emotional" than men.

It becomes necessary, therefore, to define what is meant by the greater "emotionality" of women. By this is expressed that character of a woman's nature by reason of which she responds to mental and physical stimuli more readily than men do. The term "irritability," in its strict scientific sense, has also been used; but Mr. Ellis prefers the more colourless term "affectability," to denote that characteristic. We now know that every emotion must have a physical basis, it is not a purely mental action. Every muscular or intellectual effort produces a change in the distribution of the blood, so that, as has been said, the heart and other organs form, as it were, a sort of sounding board, on which every change of consciousness, however slight, at once reverberates. In fact, "no muscle, no emotion." The familiar saying, there-

fore, that a woman's heart is tender, means that her vasomotor system responds readily to stimuli. A large portion of the "tact" so rightfully attributed to women has its basis in this affectability. We must next consider how far this emotionality of woman is a permanent fact. It is certain that it can be modified. The men of to-day are not so emotional as were those gentlemen of the 13th century who, at the king's hasty bidding, arose, went and slew Thomas A' Becket; nor are the women of to-day so emotional as were their great grandmothers. They are not so subject to "vapours" and swoons on trivial occasions. The fact, too, that emotion, in some of its coarser manifestations, is much commoner among the lower ranks of society—contrast this with the repose that stamps the caste of *Vere de Vere*—suggests that it is educable and may be diminished by training.

The works of Mr. Mason, now under review, show that in primitive times all the industries and the rudiments of all the arts were in the hands of women; but when these arts became specialised, they fell entirely into the hands of men. Take, for example, the art of painting; here the supremacy of men is unquestioned; so also in sculpture. In the evolution of music, again, women have taken a small part. While the players of music have always been women, the makers of music have always been men. Even in the list of third-rate composers, it is difficult to find a woman's name. This is probably due to that emotionality of women of which we have already spoken. Emotion is part of herself; she lives in emotion and acts in emotion, and therefore cannot give outward expression of it. "A woman absorbs music, she does not create it." Music is with them an emotional, rather than an aesthetic, influence. In poetry, again, how few women's names—Sappho, Elizabeth B. Browning, Christina Rossetti!

"Through their flowers were few, they were all roses."

In fiction certainly women take a high place; but fiction is simply an idealised version of life, demanding a quick perception of human character and of social life, coloured by a more or less intense emotional back-ground. There is one art, however, in which women rival or excel men, that is the art of acting. France has no male rival to Sarah Bernhardt.

It has thus been seen that, notwithstanding all that their education has done to bring out the artistic impulse in women, it must be admitted that it is less pronounced and less widely spread in women than in men. The explanation of this, as well as of the occurrence of a greater number of geniuses among men, is to be found in what scientific writers have called the greater *variational tendency* which is to be found in men.

This must not be taken by women as a slur upon their sex, for genius is more common among men by virtue of the same general tendency by which idiocy is more common, that is, on account of the greater variability of the male from the mean or average type of the species. In men we recognise a tendency to diverge, and to progres ; in women a tendency to organic stability and conservatism.

Much could be written about the greater longevity of women, and their lesser liabili y to certain diseases, but space forbids us. We must, however, touch briefly upon the relative prevalence of suicide, insanity and crime in the two sexes, more especially as we are able to illustrate our remarks on these subjects with some facts drawn from experience in India, a country where the position of women differs much from that of their European sisters.

To take suicide first, it will be agreed that few have committed suicide in the philosophic frame of mind of Addison's Cato, or of a Hamlet. In the great majority of cases persons who commit suicide are of perverse, eccentric, highly strung and unbalanced minds. Many factors influence the prevalence of suicide. It is not uncommon to read in newspapers of a "suicide epidemic." It appears to be more common in the early heat of summer than at other times of the year. In this respect it resembles insanity, and it may be remembered that Lombroso has collected considerable evidence which goes to prove that the period of early summer is the most fertile time for the production of works of genius, another link connecting genius with other abnormal mental states. Economic writers have pointed out the connection which exists between the suicide rate and the price of food, a relationship well known to exist in the case of criminality.

Suicide has also been found to be more common among European races than among less civilised ones, more common in towns than in the country, among the educated classes than among the illiterate. As regards sexual differences, Esquirol, the famous alienist, long ago showed that suicide was three or four times more common among men than among women. This statement, however, applies only to European countries. In India, for example, the proportion is reversed. Chevers has given the ratio as five males to every eight females (5 to 8), and Dr. Kenneth McLeod, late of Calcutta, put the ratio at 100 males to 150 females, adding that it is probably even higher among females. He gives the following reasons which seemed to him to explain the greater proportion of cases among women. Firstly, the survival of the feeling which drove the Hindu widow to commit *sati*; secondly, the lower position of women in native society ; and

lastly, their greater ignorance and want of education. The causes of suicide also differ in the two sexes. Mental disorders, passions, and domestic troubles drive women, overstrain, financial worry, and fear of disgrace men, to seek this means of escape. As to methods of committing suicide, in European countries men more often hang themselves, and women take to drowning. This also applies pretty accurately to India. According to Chevers six women out of seven will choose drowning, while men resort to hanging and drowning about equally. In Calcutta, it is said, however, that more than half the females commit suicide by hanging, while only about one-third of the males choose this method.* The question has been raised as to whether the comparative immunity of women from suicide observed in Europe is real or only apparent. It is said that, in proportion as women are brought near to men in habits and occupations, the tendency to suicide increases. † This, as will be seen, is true as regards crime.

As regards insanity, Esquirol taught that there were, on the whole, more women insane than men. This opinion has been challenged by other writers, notably by Thurnam and Jarvis. For several years past, however, in Great Britain at least, there can be no doubt that there has been an excess of women in lunatic asylums. The fact has been admitted by the Lunacy Commissioners. There are several factors which appear to us to account for this relative excess of women lunatics. First, the fact, which is generally admitted, that women recover more rapidly from attacks and are therefore more liable to be re-admitted for subsequent relapses ; and, secondly, there is that greater emotional instability of women upon which we commented above. Apart from the fact that there is in England a distinct excess of women in the general population as shown by the census returns, there are other conditions which help to bring about the same result. The period of puberty is in the lives of nervous persons a period of great danger ; but, dangerous thought it be in males, it is much more so in the other sex. Again, the periods of pregnancy and lactation are times of special peril in the nervously predisposed. In addition, the occurrence of the menopause, or grand climacteric, in women brings other dangers in its train. Besides these there is the greater tendency for affected mothers to transmit their insane taint to their

* Chevers. Med. Jurisprudence, p. 670. Lyons. Med. Juris., p. 31.

† In his Lumleian Lectures on Insanity (April 1895), Dr. Fielding Blanford states as follows:—"Men commit suicide far oftener than women ; but I am inclined to think that women make attempts or pretences of suicide oftener than men, but have not the courage to effectually accomplish it."—*Lancet*, April 6, 1895.

daughters, rather than their sons. The troubles and deprivations incidental to widowhood also are often enough to upset the mental balance.

The comparative absence of women from lunatic asylums in India is due to several causes: firstly, owing to the great privacy of their lives, it is not necessary to send milder cases of insanity to asylums, even if there is not a great unwillingness to send women at all; secondly, child-birth and its attendant troubles are much less dangerous among women in India than among their more highly organised sisters in European countries.

As regards crime, we may say at once that everywhere women are less criminal than men. This subject has been investigated with characteristic thoroughness by Lombroso and Ferrero of Turin in the recently published work above quoted, which has just appeared in an English dress in Mr. Fisher Unwin's new Criminology Series.*

While the statement that women are less criminal than men is true, it is unfortunately also a fact that, in some countries, Great Britain, for instance, the tide of female criminality is rising. This seems to be associated with the growing habit of alcoholism among women. Women apparently find it easier to drift into a habit of crime than men, or perhaps it would be juster to say they find it more difficult to commence an honest life afresh; for in the year 1888 no less than 40 *per cent.* of the women committed to prisons had more than *ten* previous convictions, a fact which shows that the punishments meted out have not been successful in their aims.

Some of the most serious forms of crime appear to be committed about equally by both sexes. The crimes of women, however, are usually domestic, against fathers, husbands and children. Crimes of violence are, as might be expected, less common. Poisoning is a favourite form of female crime. It may be added that, when a woman wants to commit a crime, she seldom finds it difficult to get a man to do it for her. The domestic secludedness of women undoubtedly acts strongly against the amount of female criminality. That this accounts for the very small proportion of female criminals in India, is certain. In the Jails of Bengal, for example, in five years (1889-1893), while 422,546 males were admitted into jails (including cases under trial), only 17,942 females were admitted; in other words, female crime, as tested by the admissions to jails, was twenty times less common than among men. In fact, in most Indian prisons, only a small space is set apart for the female wards.

It is apparent, then, that in proportion as women have taken upon themselves the employments of men, and come to touch

* The Female Offender, by Lombroso and Ferrero. London 1895.

life in more various points, so does the amount of criminality increase among them, just as we have shown above that suicide increases, and as certain diseases, such as paralysis of the insane, formerly considered a man's disease, have become increasingly common among females.

The higher tendency to spontaneous variations in males, which we have spoken of above, is also shown in the greater prevalence of congenital abnormalities in male children. Still-born children with large heads are more frequently male. Hare-lip is more common, too, in boys. Professor Macalister has shown that muscular anomalies are more commonly found in male subjects. Male deaf mutes are more frequent than female, as shown by the investigations of Dr. Langdon Down. The greatest of all abnormalities, the "higher degeneracy," as Max Nordau has called it, genius, is admittedly more common among men. The importance of the tendency to variation, upon which alone natural selection can act, is well known to all Darwinians, and need not here be further insisted upon.

We have thus far briefly, and often abruptly, summed up and commented upon the facts which Mr. Ellis has collected together in his useful and interesting volume. The impartiality and fairness of the writer will be patent to every reader. No work known to us has hitherto been published in which all the facts have been marshalled together with so much honesty, discrimination and care.

Let us now consider the conclusions which Mr. Ellis has arrived at as the result of his comprehensive review of man and women in all their relations.

In the first place, it is evident that no essential or radical characteristic exists in man or woman which cannot be influenced by external modifying conditions. In Mr. Ellis' words, "our present knowledge cannot tell us what man or woman might be or ought to be, but only what they actually are," Having shown that man and woman are modifiable, we are therefore forbidden to dogmatise rigidly about their respective spheres. This is a matter which experience alone in every given case can determine. To assume that woman is only "undeveloped man," is as unscientific as it is misleading. In so far as woman approaches the child type, she approaches the higher type of evolution to which the human race is tending. There is no such thing as a natural inferiority of women, as some writers have vainly taught. Every inaptitude of women is accompanied by some compensatory aptitude.

The present generation has heard much of women's rights, too often only women's wrongs, for it cannot be natural or right

that women should be driven to take up tasks for which the greater strength and endurance of man has fitted him. When we see or hear of women adopting the garments of men, or joining in their rougher games or amusements, we need not be too harsh in our judgments. We may remember how long it was considered "unwomanly" for a girl t take up any form of healthy out-of-door exercise. When we see women writers openly advocating relaxation of the marriage ties, we must remember that some women have suffered much from men's supremacy, and for the sake of what they have suffered much may be forgiven. The woman of to-day has been rapidly emancipated. If the nineteenth century has advanced much, women have advanced at almost unmeasurable speed. Small wonder is it, then, if we find that in a few, their self-control has not kept pace with the demands upon their nervous energy, and we must not consider as the leaders and pioneers those whose vagaries and extravagances are the most pronounced. We have seen that the facts above reviewed do not permit us to introduce any artificial sexual barrier into social concerns. The respective fitness of men and women for any kind of work can be determined only by actual experiment. If the experiment is successful, so much the better for the race; if it fails, so much the worse for those who have broken Nature's laws. We may, therefore, look forward with patience at the processes going on around us. To have shown that there is nothing in science to justify a hasty condemnation of the claims of women, is not a lame or impotent conclusion to the facts which have been here reviewed.

W. J. BUCHANAN, M. B.,
*Surgeon Captain, I. M. S.*

# ART. VI.—CASTE AND COLOUR IN ANCIENT INDIA.

## AN ETHNICAL STUDY.

"It is well known that, from the point of view of the colouring, human races can be divided into four principal groups: white, yellow, black, and red races."—*De Quatrefages.*

"The colour of the Brâhmans is white; of the Kshattriyas red; of the Vâishyas yellow; of the Shûdras black."—*Mahâbhârata.*

## I.

## ETHNICAL SCIENCE.

IT is a fact of common observation that the human race is not uniform; that all peoples in all countries do not belong to a single physical type. This simple fact is the basis of ethnical science, which seeks to give an account of the various physical types, their characteristic differences, and their relations to each other.

The work of classification is still far from complete. It is met by a difficulty which is common to every region of natural classification, the fact that nature never produces two individuals exactly the same in all particulars; and that, therefore, any general description will not exactly fit all the members of any group, however closely allied they may be. But there are certain striking characteristics which are possessed, with slight variations, by large groups, families, and races of men; and ethnical science seeks to describe these striking characteristics, and to make them the basis of a general classification of the whole human race.

One of the most striking characteristics which divide the human race into a few great groups, is colour; for instance, broadly speaking, the peoples of Europe are white; the peoples of China are yellow; the peoples of Equatorial Africa are black; and the natives of South America are red. Then, within these great divisions, we find lesser distinctions of colour. In Europe, the northern division of the white race, which centres round Scandinavia, is distinguished by golden hair and blue eyes; the white race of Central Europe is distinguished by yellow or red hair and grey eyes; the white race of Southern Europe is distinguished by black hair and black eyes. And this subdivision seems to strike, in a minor key, the chord of the larger subdivision, into white, red, yellow, and black races; as though each great race had a series of sub races, which repeated in a less marked form, the shades of difference between the great races.

So much for colour. Another very marked distinction

between the races is the form of the skull; the most easily distinguished characteristic of which is the relation of the breadth of the skull to its length. So that there are races with very long skulls—dolichocephalic races; races with very short skulls—brachycephalic races; and races with skulls of a medium form—orthocephalic. And there seems to be a connection, not quite clear and completely grasped as yet, between the form of the skull and the colour of the race For the black races have, generally speaking, very long skulls; the yellow races have short, round skulls; and the white races generally stand somewhere between these extremes. As far as we know, the red races have also longish skulls; though probably not so long as the extreme black type.

Now the value of these characteristics, as signs of race-difference and race-relation, depends on their permanence. What evidence have we of the permanence of skull-form and colour?

The evidence for the permanence of skull-form is very great and is constantly being added to. We may illustrate it by a simple example. We often find that the form of the skulls of people inhabiting any locality is exactly the same as the form of the skulls in the oldest grave-yards and burial-mounds; and, in many cases, where very old skulls have been found, in lime-stone-caves, and gravel-beds, they have exactly the same character as the skulls of the present inhabitants of the same locality. This identity has been proved in the case of skulls which may be hundreds of thousands of years old, judging from their position in certain geological formations. So that everything tends to show that, when a race remains isolated, the form of the skull remains the same over extremely long periods.

As to colour, our evidence is not so complete. And yet we have two very convincing classes of evidence, the evidence of ancient pictures, and the evidence of ancient writers. In Egypt there are pictures several thousand years old, in which the different colours of various races were very carefully represented. And wherever we can certainly identify the races, as in the case of the Negroes, we find that, after a lapse of several thousand years, the colours are the same. Then we have many descriptions of the colours of races in classical authors; and their close relation to the colour of the races inhabiting the same localities at the present day, strengthens our belief in the permanence of race-colour during very long periods.

We have, therefore, two chief characteristics to distinguish difference of race; the form of the skull and the colour of the skin. We know both to be fairly permanent through periods

of several thousand years. The skin-colour is the easiest to distinguish; the skull-form is the more reliable, because, as far as we know, climate can have no effect on the form of the skull, except during enormously long periods. And even the effect of climate on colour is generally exaggerated, and may be largely eliminated by careful observation. The chief effect of climate on colour is the gradual darkening of the complexion by sun burn; but this darkening produces a different effect on different original colours. For example, if a white race, a red race, and a yellow race are exposed to a tropical climate for two or three thousand years, the complexions of all three will become much darker, owing to the influence of sunburn. But the white race will be white-brown; the red race will be red-brown; and the yellow race will be yellow-brown; in other words they will be as easily distinguished as they were originally; and a curious fact is that children tend to revert to the original colour of their race. But the full meaning of this reversion, and much more that relates to skin colour, is still imperfectly understood, and must remain so till much more evidence is collected and classified.

We have spoken of isolated races. But races are not always isolated; what, then, becomes of our characteristic distinctions in the case of mixture of races?

As far as skull form is concerned, our evidence is still imperfect; and, in the case of colour, it is probable that popular observation is very much in advance of strictly scientific classification. In countries where a group of widely different races have met, and where a certain amount of race mixture has taken place, as in India and North America, it is a matter of common observation that the elements of admixture, and even their ratio, can be easily and certainly distinguished. In America, there is no possible confusion between Mulattoes, the offspring of admixture between a black and a white race; Mestizoes, between a white and a red race; Zambos or Cafusos, between a red and a black race. And the existence of words like Quadroon and Octaroon shows how easily and certainly the degree of intermixture can be distinguished. The same thing applies to India. It is still a doubtful point how far these intermediate races are permanent; and how far they tend to die out, or to revert to one or other of the original types from which they sprang.

The completion and classification of these observations and others of a like character, is the object of ethnical science.

## II.

## Ethnology in India.

In India the difficulties of ethnical science are very great. We cannot compare the races of to-day with the races of the

past by means of skull measurements, because nearly all the Indian peoples burn their dead. We have no complete systematic skull measurements of living races to form a basis of classification, and there are two great difficulties in the way of making a systematic series of measurements. The first is the scarcity of skilled ethnologists; the second is social and religious prejudice. We must, therefore, for the present, devise new methods of observation, specially suited to India.

The best method possible at present seems to be to make a rough survey of all the Indian peoples, and to deduce from this survey a few leading ethnical types. These few types will serve as a starting point for a more exact and scientific method in the future.

For a rough survey such as we propose to take of the Indian peoples, the simplest and easiest basis is colour. And, from the point of view of colour, we shall find the Indian peoples divided into four or five principal types, with a series of intermediate types gradually melting into each other.

Of these four or five great types, distinguished by colour, the first to attract attention is the fair, almost white, type, which is largely represented in the Brâhman caste. Besides a white skin, the chief characteristics of this type are medium height, undeveloped chests and muscles; large heads; fine, clean cut features; curved noses; hair and beard of fine texture, and often wavy; and not infrequently, blue or blue-grey eyes, especially in the Mahratta county and Cashmir. Though now distributed all over India, the original home of the Brâhmans seems to have been in the north; in the Punjab, or possibly in Kashmir. And the fair skin and blue eyes of many Brâhmans would lead us to believe that, before entering India, the race to which these white Brâhmans belonged, dwelt still further to the north, beyond the Himâlayas. Only a part of the Brâhmans of to-day belong to this fair type; and Indian tradition shows us the reason of this, by recording that in ancient times members of other castes could win their way to Brâhmanhood.

The next great type, from the point of view of colour, is the red Râjput. It is only a few months since the existence of this red type was clearly perceived; but the complete agreement of all the evidence obtained, and to be presently reproduced, makes it impossible to doubt that the nucleus of the Râjputs is a red type, very similar in colour to the red races of America. There are other red races in the Old World, in Egypt, Burma, and probably Corea; but we cannot yet tell whether they are closely connected with the Râjputs. Other characteristics of the red Râjput type are great height, great strength and symmetry, rather long faces, straight noses,

straight hair. We do not know that the Râjputs ever have blue, grey, or hazel eyes.

The name Râjput, the Hindi form of the Sanskrit Rajaputra—"King's son"—was originally a synonym of Râjanya, "Kingly," showing that the Râjputs were the ruling race in ancient India. The name Râjaputra dates from Vedic days, as we find Vishvâmitra, the seer of the third section of Vedic Hymns, called "Râjaputra," or Rajput. Afterwards the name Kshatria, "warrior," became more common. The greatest of the Kshattryas were Vishvâmitra, Râma, Krishna, and Buddha. The last three are held to be avatâras, or divine incarnations; a tradition showing the spiritual importance of the ancient Râjputs.

The high value which the Râjputs have always put upon purity of race may justify a belief that these Indian heroes belonged to the same race as the nucleus of the Râjputs to-day—a red type somewhat similar to the Egyptians.

It is probable that these two types, the white Brâhman and the red Râjput, make up together not more than two or three per cent. of the whole population of India, although, socially and politically, they were always the dominant types. The rest of the population of India, numbering more than two hundred and fifty millions, falls between two extreme types: a yellow type and a black type. The two merge into each other, and it is impossible to draw a clear line between them. All we can say is, that we have evidence of the mingling of two races, a yellow race and a black race; and that a few tribes have still preserved almost pure examples of each of these types.

The purest examples of the yellow type are the Kocch and Santâli in Lower Bengal, and the Sâvara of Madras. They are all distinctly Mongoloid in type; that is, besides yellow skin, especially visible in the children, they have flat faces, high cheek-bones, almost no beard, and, very often, oblique eyes. Their nearest relatives are, apparently, the peoples of Northern Burma and Thibet. This relationship is confirmed by their distribution in India.

The Kocch lie near the Tibetan frontier. The Santâlis on one hand approach the Kocch, and on the other the Vindhya mountains. There are two groups of Sâvaras; the one south of the Santâlis, on the Madras Ghâts; the other west of the Santâlis, in the Vindhya mountains. This series of yellow nuclei is surrounded by a penumbra, gradually merging into the other peoples. The extreme opposite type, among these other peoples, is the black Dravidian of South India. This type occupies the Deccan, and spreads along the shores of the Bay of Bengal and across the Vindhyas, considerably to the north. It

is possible that we may, in the future, have to distinguish two black types in India: one of which may approach the types of Melanesia and Australia, while the other may have to be referred to Africa or Madagascar. The well-known relation between the fauna of India and Africa would support this idea.

The most marked Dravidian type is distinguished by black or nearly black skin; very long face, long skull, stiff black hair and beard, and large black eyes, not oblique; the nose is flattened at the top, long, and with broad lobes.

We cannot do more than touch on the mental character of these four types. The white Brâhmans are distinguished by a genius for order, which made them the lawgivers, priests, and diplomatists of ancient India. The red Râjputs are distinguished by a genius for power, which made them the rulers of ancient India, and sometimes also the religious leaders, as were Krishna and Buddha. The yellow, Mongoloid, or Indo-Chinese, races are distinguished by a genius for agriculture, as are many Mongol peoples, notably the Chinese. The black Dravidians are probably distinguished by a genius for the mechanical arts, though a large section of them are also engaged in agriculture. It is probable that among them first grew up the system of trade-guilds which gradually developed into hereditary castes of artizans and craftsmen, the chief of which are the workers in gold, brass, iron, stone and wood. These, then, are the four chief types of India, from the point of view of colour. And round each of these central types is a penumbra, gradually merging into the others. It is easy to define the types; but it is impossible to say exactly where one merges into another. It is easy to count the mountain tops of Indian society; but it is impossible to say where each mountain ends and merges into the plain. Let us carry ourselves back in imagination to a far distant day, at the dawn of Indian history, when these four races first met on the plains of Northern India. How long ago this was, who can tell? Perhaps five thousand years ago; perhaps ten thousand; perhaps even longer. We can easily imagine how, by the gradual contact and mutual accommodation of these four races—the white race with its genius for order; the red race, with its genius for power; the yellow race, with its genius for agriculture; the black race, with its genius for industry—the famous system of four castes might have been originally formed; a balance being struck between the races, a condition of stable equilibrium being reached, and each race gradually absorbing to itself the social activities which it was best fitted by race-genius to perform. Add to this the sense of

race-purity, so strong among the Brâhmans and Râjputs, and we can easily see how the system of the four castes which gives such a singular appearance to the polity of ancient India, might have gradually grown up by a series of quite natural and inevitable steps.

That the system of Four Castes did actually grow up in this way, from the contact of four races, is asserted in the sacred epics of India. Thus we find the sage Bhrigu declaring: "The varna, the colour, of the Brâhmans, was white; the colour of the Kshattriyas was red; of the Vâishyas, yellow; of the Shûdras black . . . Those twice-born who were fond of sensual pleasure, fiery, irascible, prone to violence, who had forsaken their duty, and were red-limbed, became Kshattriyas; the twice-born who derived their livelihood from cattle, who were yellow, who subsisted by agriculture, and who neglected to practice their duties, entered into the state of Vâishyas; the twice-born who were addicted to mischief and falsehood, who were covetous, who lived by all kinds of work, who were black, and had fallen from purity, reached the condition of Shûdras." *

We must remember that these descriptions of the races are from the standpoint of the Brâhmans, whose nucleus is the white race, and we shall then be prepared to discount, in some degree, the saying that "the red race had forsaken their duty;" that "the yellow race neglected to practise their duty;" that "the black race were addicted to mischief and falsehood, and had fallen from purity;" as "duty" here means the duty assigned to the other races, not by themselves, but by the ideals of the Brâhmanical polity of the white nucleus which sought to dominate all the rest.

Quite recently, a great advance has been made in scientific ethnology in India, chiefly under the initiative of Mr. H. H. Risley, of the Bengal Civil Service; and, so far as conclusions have been reached along the lines of cranial and anthropometric research, Mr. Risley's work seems to support the broad classification of races given above. He has shown quite clearly the broad unity of the Dravidian (black) race; its clear separation from what he calls, provisionally, the "Aryan" type, which I take to be the same as the white nucleus of the Brâhmans; and a third type is also indicated, allied to the Tibetan and Burmese, and, therefore, apparently, identical with the type I have described as the "yellow Indo-Chinese."

So far, I think, Mr. Risley has not touched on the ethnology of the Rajputs, and it will be very interesting to see what

* Mahâbhârata, Shântiparvan: 6934 et. seq

relation cranial measurement will bear to colour in their case. If we may draw an inference from other red races, we may expect that the typical skull of the Râjput will be found to be long; though not quite so long as in the case of the Dravidian.

But, even when these so much needed measurements are completed, we shall have to fall back on colour, as our surest method of identifying the ancient and the modern races of India; because we have certain colour data in the old Sanskrit books, while we have not, nor are likely to have, any ancient cranial data, as the Indian races seem to have burned their dead, even at a remote antiquity.

I think, therefore, that our best test of race in India is, and will always remain, the test of colour.

## III.

### The White Brahmans.

Do the Brâhmans represent a race apart, distinct from the other peoples of India, or do they, on the other hand, simply represent a profession drawn from all races, by selected ability, afterwards confirmed by heredity, as do, for instance, the priests of the Russian Church? In other words: are the Brâhmans a separate race; or are they an hereditary profession drawn from the body of the people of India?

To give an entirely satisfying and adequate answer to this problem is enormously difficult: for we are only in the infancy of the science of race, and India has lagged a little behind the rest of the world. It must be understood, therefore, that the views I shall put forward, in this question of the race of the Brâhmans, are in a large degree tentative and inconclusive; are rather a stepping stone to further research than the final and complete fruit of research already brought to maturity.

In travelling through many provinces of India, north, south, east and west, one is gradually led to the observation that a Brâhman can be distinguished among a group of natives of various castes and types, with comparative certainty; that, besides peculiarities of dress, this distinction is aided by a series of characteristics distinctly ethnical; and, thirdly, that these characteristics are broadly the same all over India, but are found in perfection only in a small proportion of the Brâhman caste, while the rest merge, through what we may again call a penumbra, into the characteristics of other types.

These observations lead gradually to an idea of the pure Brâhman type, the leading characteristics of which are: fair skin, of almost European whiteness in some cases, and distinctly without the reddish tinge of the Râjputs, or the yellowish tinge of the Indo-Chinese—in a word, a distinctly white

race, once the browning effect of the sun-burn has been allowed for;—then the Brâhman head, though oval, seems not so long as the Râjput's; stands, in fact, between the round skull of the yellow Indo-Chinese and the longish skull of the red Râjput; while the typical Dravidian skull seems longest of all.

It is greatly to be hoped that this general observation as to skull form, will, in the near future, be supplemented by precise measurements undertaken by a number of residents in various parts of India.

Yet another characteristic of the Brâhman type seems to be the largeness of the forehead as contrasted with the smallness of the jaw; and in some cases, the weakness of the mouth. Then the nose, in the purest types, seems aquiline, or sharp, and slightly curved, as distinguished from the straight nose of the Râjput, and the squat nose of the Indo-Chinese. Lastly, the hair of the pure Brâhmans generally manifests a tendency to waviness; quite different from the curly hair of some Europeans, and the woolly hair of the Negroes; different also from the straight hair of the Râjput, and the lank hair of the Indo-Chinese.

One is, therefore, led to the conclusion that the nucleus of the Brâhmans is really racially distinct from the other great Indian types; being distinguished by white skin, aquiline nose, large forehead, and wavy hair.

It is needless to say that this description needs to be supplemented by a large series of more strictly scientific observations, carried out according to the best methods of ethnical science. I am confident, however, that this description will prove broadly correct, though necessarily incomplete.

One more observation of high ethnical value may be added to this description of the Brâhmans. This is, that it is not uncommon to meet Brâhmans with grey or blue eyes, especially in the Mahratta country, on the Western Ghâts. It may not be indiscreet to say that a distinguished Mahratta Brâhman, now resident in Madras and known as a statesman, whose only enemy was his extreme honesty, is particularly distinguished by his bright grey-blue eyes. In Hindustan this characteristic is not, so far as I have seen, so common as among the Brâhmans of the Mahratta country; but it seems to re-appear in the Northern Punjab and Kashmir. Indeed, all the evidence we have, though it is very slight, points to the Punjab as the first home of this white race in India.

I have already pointed out that these four race-types—the white Brâhman, the red Râjput, the yellow Indo-Chinese, and the black Dravidian—correspond in a remarkable way to the old Indian tradition, voiced by Bhrigu in the Mahâbhârata,

that "the colour of the Brâhmans was white; of the Kshattriyas, red; of the Vâishyas, yellow; of the Sûdras, black."

There is another old tradition referring to the four varnas—which may mean either the four castes or the four colours—a tradition found as far back as the Purusha Sûkta of the Rig-Veda, which says that the four castes were formed from Brahmâ—the Brâhmans from the mouth; the Râjanyo Kshatriyas from the arms; the Vâishyas from the thighs, the Shûdras from the feet.

If for a moment we identify the four castes, or colours, with the four races of the same colours, we may find in this old myth a picture of the early position of the four great race-types of India. Let us say that Brahmâ represents Brahmavartta, the old Indian land. Then from the mouth of Brahmavartta (the Punjab) come the white Brâhmans; from the arms (Oudh and Râjputâna) the red Râjanya Kshattriyas; from the thighs (the Vindhyas and Eastern Ghâts) the yellow Vâishyas; from the feet (the Deccan) the black Dravidians, or Shûdras. I put forward this interpretation of the old myth rather as a mnemonic of the relative positions of the four great race types in their purity, than as a strictly scientific fact. Strictly scientific it may be, but we are not yet entitled to say it is. Without insisting on this geographical explanation of the old Vedic myth, we may safely say that the tradition of the origin of the Brâhmans from the mouth of the formative deity, while the other castes issued from other members, undoubtedly refers to a difference of origin, so distinct as clearly to include a difference of race.

We are further told, in the Mahâbhârata, that the colour of the Brâhmans was white; and in this tradition we have a perfect prototype of the ethnical evidence which led us to declare that the nucleus of the Brâhmans consisted of a race different from the other great ethnic types of India; and that this race was further a white race.

This only refers to the nucleus of the Brâhmans, as we have already pointed out. Here, again, the ethnical evidence is in perfect harmony with the old Indian tradition. For we have, especially in the older Sanskrit books, abundant evidence that members of the Kshattriya and Vâishya, or warrior and agricultural classes, and even of the black Shûdra class, were tolerably frequently admitted to the privileges of Brâhmanhood, and absorbed within the ranks of the Brâhman caste.

If specific references to these admissions within the Brâhman caste be required, they can easily be given. The Bhâgavata Purâna (IX, 2, 17) says: "From Dhrishta were descended the Dharshta Kshattriyas, who obtained Brâhmanhood on earth." In the Harivansha we read (XI, 658) that "two sons of Nâbhâgârishta, who were Vâishyas, became Brâhmans."

Quotations of this sort may be multiplied almost indefinitely. It is enough, however, to point out that this Indian tradition is in perfect accordance with the ethnical evidence, as the white nucleus of the Brâhman caste is surrounded by a penumbra of Brâhmans of other race-types, and a series of mixed types between the white race and the other races. These mixed types in the Brâhman caste to-day are, in all likelihood, the descendants of men like Dhrishta and Nâbhâgârishta, whose children found a place within the order of Brâhmans.

This triple agreement between the ethnic evidence and the Indian tradition, as to the Brâhmans being a separate race—a white race—and being further surrounded by a penumbra of other races, serves to confirm very strongly our ethnic conclusions, and also to confirm the authenticity of the ancient Indian tradition. The two mutually agreeing sources of evidence tend to support each other.

When, however, we turn to the question of names and enquire what was originally the name of this white race, we are met with certain difficulties.

So much has been written on the meaning of the word Brâhman, that it is only necessary to summarise the existing evidence. In the first place, Brâhman, or more correctly Brâhmana, as the name of a caste or priestly order, is, although very ancient, yet, compared with the most ancient period of Sanskrit literature, the period of the Vedic hymns, of comparatively recent date.

In illustrating a passage of the seventh Mandala of the Rig Veda (VII, 103.1), Professor Roth remarks :—"This is the only place in the first nine Mandalas of the Rig Veda in which the word Brâhmana is found in its later sense, while the tenth (last) Mandala offers a number of instances." Dr. Muir, who more precisely defines the use of Brâhman, summarizes his conclusions thus : "The term Brâhmana occurs only in eight hymns of the Rig Veda, besides the Purusha Sûkta ; whilst Brahman occurs in forty-six. The former of these words could not, therefore, have been in common use at the time when the greater part of the hymns were composed." Dr. Muir further shows that Brâhmana is probably a synonym of Brahma-putra, the son of a Brahman ; just as Râjanya is equivalent to Râja-putra, or Râjput, the son of a Prince. Further, the word Brahman (masculine) is one who offers a Brahman (neuter) ; that is, one who offers a prayer or hymn. Hence, the name of the Brâhman caste is derived from their priestly function, and is not a race name.

Much evidence exists to show that the white race, which forms the nucleus of the Brâhman caste, must have very gradually acquired the prerogatives of the priestly function,

through race genius, and capacity for order and discipline, in the Vedic period of Indian history; just as, in later periods, they acquired, by the same race genius, the social and intellectual pre-eminence which they enjoy in modern India. Nor can we consider that Aryan is the real race name of the old white race which gradually won for itself this priestly and intellectual pre-eminence; for the Vedas clearly show that Arya was applied to Kshattriyas or Râjanyas, and Vâishyas, as well as to Brâhmans.

Hence, we are left in the dark as to the original name of this white race, which, with its transcendent genius for order, has left such a lasting mark on the history of India.

We may say, therefore, that the Brâhmans are a priestly hierarchy, with a distinct nucleus of white race, whose great genius for discipline and order has enabled them to make their caste the dominant social element in almost every province in India; while the same genius for order, turned to the field of culture, has given them pre-eminence in philosophy, logic, rhetoric, mathematics and poetry; at least those forms of poetry which demand rather consummate skill than fresh inspiration.

## IV.

### The Red Rajputs.

It is strange, but true, that, though we have been in contact with Râjputâna for over a hundred years, absolutely no material yet exists for the exact study of its ethnology. Much has been put on record for the historian, the student of literature, of myths and traditions; much has been written that is exceedingly picturesque and valuable, beginning with Colonel Tod's incomparable Annals, and ending with the latest gazetteer; but the scientific student of ethnology has been unaccountably left out in the cold.

Nor can we quite wonder at this; for even in Europe exact ethnology is a young science, not long past its nonage, and we know that India is, in all matters of advanced scientific investigation, nearly a generation behind us. This is not in any way a reproach, for considering the difficulties arising from diversity of tongues, natural impediments, and climatic conditions; and taking into account also the vastness of the field of research, and the almost total absence of trained observers whose whole attention can be given up to ethnical investigations, it could hardly be otherwise. But the fact remains that Râjputâna's page in the history of ethnology is still a blank, though the Râjputs are one of the most notable races in the whole of history, and can look back to a splendid past, extending over, not centuries only, but millenniums.

Let us examine the existing ethnical evidence as to the real race character of the Râjput tribes. To classify them completely we should require definite and precise information on the following points: average height, build, facial type, cephalic and orbital index, texture of hair, and colour of skin and eyes. Let us begin by indicating the points on which a mass of evidence is still required. These are the average height and cephalic and orbital index, to complete which several thousand measurements, rigorously carried out, are necessary. If it were not dangerous to speculate in the absence of precise data, I should be inclined to say that I expect the average height, among the pure Râjputs, will be unusually high—much higher than among the pure Brâhmans. Then I expect that the pure Râjputs will be found to be long-skulled, as much so, perhaps, as the true Scandinavians; while the Brâhman skulls are much shorter, perhaps orthocephalous. Then, again, I should think the Râjput orbital index will give the same result as the cephalic; will show a long, oval orbit, but not at all inclined. These, however, are points for the future investigator. As to the build of the Râjputs, all authorities are, I think, agreed that they are splendidly proportioned; while the true Brâhmans are rather narrow-shouldered and flat-chested. As far as my observations go, the Râjputs are equally differentiated from the Brâhmans by facial type; the Râjput face being longer, the nose straighter, and the mouth and chin firmer and more symmetrical; but here again more precise investigation is needed. Among the Râjputs, hair and beard are black, as among the Brâhmans, but, I think, without the waved texture, or ripple, generally found in the hair of pure Brâhmans. And, while blue or grey eyes are not uncommon among the Brâhmans, especially in the Mahratta country, I have never heard of them among the Râjputs. There remains only the colour of the skin,—and it is on this that I have collected most evidence.

As far as I could ascertain, absolutely no facts bearing on this point had been put on record; so that I was compelled to have recourse to observers who had been brought into contact with the Râjputs, and who had had special opportunities of forming an opinion. The first reply I received to my enquiries was from Sir George Birdwood, with special reference to a passage in the Mahâbhârata, which I shall presently refer to. His answer was: "lohita, red, ruddy, is a proper epithet to apply to a pure Râjput." I then received a note on the subject from Sir William Moore, who said that "red, ruddy, rust-coloured, would describe the appearance of the best class of Rajputs, but there are many who would come under the heading brown."

Sir Richard Meade added important details to this general conclusion: "I have had much intercourse with Râjputs of all classes," he wrote, "and should say that the colour of the true Râjput is fairer than that of the people of the North-Western Provinces; that the skin is clearer under the colour, if I may so describe it, while the colour itself is somewhat less pronounced. Of course, as a rule, Chiefs and Thakurs are fairer than the lower orders of Râjputs, who are themselves more exposed, and who are the descendants of those who for many generations have been so."

It was not quite clear from this, what share sun-burn had had in producing the special colour of the Râjputs, and what was the colour of the skin after sun-burn had been eliminated. In answer to further enquiries on this point, Sir Richard Meade wrote: "The sub-shade of colour in many of the Râjputs I have seen was of a light ruddy character; in others it was rather sallow, and in others again of a dusky reddish tinge."

Sir Richard Temple, to whom I showed these conclusions, endorses them: "I should concur in the view that the colour of the true Râjputs is a reddish brown, and that it is possible, or likely, that the brownish element is only the result of sun-action."

One additional point I received from Dr. Fitzedward Hall, namely, that the skin colour of the true Râjputs is extremely close to that of the red-skins of America.

With such a concurrence of testimony, the question of the colour of the Râjputs is practically solved. They are a red or ruddy race, varying from light red—almost orange, according to Dr. Hall—to dusky reddish, or reddish-brown.

These Râjputs of pure race are not very numerous, when compared with the whole population of India. They certainly do not number more than a million or two, and may be considerably less. Though they are, I believe, the only red tribe in India—unless we make a separate class of the Jâinas, many of whom are ruddy, and who are closely connected by race with the Râjputs—, there are many other instances of red races in the Old World. Thus the Coreans, many of the Siamese, the Karens of Burma, the Egyptians, and certain equatorial African tribes, are also red; though this is not sufficient to establish their race-relationship with the Râjputs; who have, by the way, a better claim than the red-skins of America to the title of Red Indians.

Then there is reason to believe that many Polynesian tribes are red or ruddy; and that the majority of South Americans, of pure blood, belong to the same class. It must be remembered, however, that, among this great group of red races, there are probably as many distinct sub-races as among the white

race or the yellow. However, this may be, it will have become clear, I think, that we can no longer consider the red Râjputs as closely connected with the white Brâhmans. Other ethnic characteristics, which I have already pointed out, fully support this view. The Râjputs are a taller, sturdier race than the Brâhmans, and differ from them in texture of hair, facial type, eyes, and skin colour; and also, I think it will be found, in cephalic and orbital index. The red Râjput differs, in fact, from the white Brâhman in every point which, according to ethnical canons, constitutes difference of race.

And this brings me to a point of the highest interest to the student of Ancient India, the fact that this difference in race between Râjput and Brâhman has been recognized in Sanskrit literature for ages back. Whether the Solar races, children of the ruddy sun, and the Lunar races, children of the pale moon, really refer to these two race-stocks, the red and the white, is a point that I cannot fully enter into here; but, happily, we are not reduced to doubtful analogies like this, for there are passages in which the difference is put with a clearness that the most accurate pupil of Broca or De Quatrefages could hardly surpass. The most remarkable of these that I have yet met with has been quoted already from the Sântiparvan of the Mahâbhârata. The sage Bhrigu is the speaker: "Brahmâ," he says, "formed men, Brâhmans, Kshattriyas, Vâishyas, and Shûdras. The colour of the Brâhmans was white; of the Kshattriyas red; of the Vâishyas yellow; of the Shûdras black." In reply to an objection from Bharadvaja, Bhrigu continues: "This world, originally formed all Brâhmic by Brahmâ, was afterwards coloured by deeds; the twice-born, who were fond of love and feasts, who were fiery, prone to anger, and violence, who had forsaken their duty, and were red-limbed, became warrior-Kshattriyas." *Shântiparvan*, 6932, *et. seq.*

I have been obliged to translate this passage more loosely than I should wish, as it is impossible in English to preserve the double meaning of the Sanskrit word *varna*, which means colour as well as class.

In this passage, two different words are used to describe the colour of the Kshattriyas. In the first verse, "of the Brâhmans white was the colour, and of the Kshattriyas red," the word used is *lohita*, referred to by Sir George Birdwood. Let me illustrate this word by a few further examples: *lohita-mrittikâ* is red chalk; *lohita*, used alone, means the planet Mars, and blood, as well as red; *lohitaka* is a ruby; and *lohitayâs*, copper; so that we have the Kshattriya described as "copper-coloured" in the Mahâbhârata—the very term used to describe the red-skins of America—,thus furnishing an interesting confirmation of Dr. Hall's comparison.

Then, as if to put beyond all doubt what *lohita* meant, we have, in the verse that follows, the adjective *raktânga*, that is, ruddy-limbed or red-limbed; the word *rakta* being used to describe the colour of red chalk, blood, copper, vermillion, red-lead, the red lotus, and red coral. Thus the ancient Kshattriyas were red.

Now, from this passage a most interesting deduction can be drawn, and not from this only, but from many similar passages; and that is, that the Kshattriyas of ancient India are precisely identical in ethnic characteristics with the Râjputs of to-day. "Fond of love and feasts, fiery, prone to anger and violence, and red-limbed," says the old Sanskrit epic, in which Professor Goldstücker rightly saw an echo of ancient bardic songs; "fond of love and feasts, fiery, prone to anger and violence, and red-limbed," say the authorities best acquainted with the Râjputs to-day; and in face of this remarkable evidence, I do not think that the identity of the Râjputs with the old Kshattriya can any longer be questioned; the more so, when it is remembered that the Râjputs have preserved unbroken genealogies, shewing their descent from the Kshattriyas of old.

But Kshattriya is not really a race name, any more than Brâhman. Kshattriya really means warrior, or Armiger, from Kshattra, a weapon. The earliest title of this famous race is Râjanya, akin, on the one hand, to reign, regal, and royal; and on the other, probably, to *ranga* and *rakta*, red.

Amongst the famous Râjanya sages, or Râjarshis, of Vedic India, are mentioned Arshtishena, Vitahavya, Prithu, Mândhâtri, Ambarîsha, Manu, Ida, and Vishvâmitra, the Rishi of the third section of the Rig-Veda hymns, in which occurs the thrice-holy Gâyatrî, the "Mother of the Vedas." [R-V. III., 62,10]

The fact that this hymn, repeated every morning by thousands of Brâhmans bathing in the Sacred Ganges, owns as its author a Râjanya, and not a Brâhman, gives us a vision of those ancient days when the spiritual pre-eminence of India was in other hands; when "the Brâhman sat at the foot of the Kshattriya." A notable survival of that early time is found in a custom of the Rânas of Mewar, who unite spiritual with royal authority, and officiate as high priests in the temple of the guardian deity of their race.

But I cannot do more than touch on this question of the ancient spiritual dignity of the Râjanyas, who are the Kshattriyas and the Râjputs. A question like this could find full elucidation only in a history of ancient India where the qualities of each race were fully recorded, and their due share assigned to each in the splendid epic of India's history; an epic, not written perhaps in the annals of the chronicler but rather

blazoned abroad on the face of India's hills and valleys, in the figure of town and temple, and the deeper and more lasting monuments of poetry, philosophy and religion.

In this splendid epic of India, can be discerned, I think, four different elements, like the four voices in a perfect harmony, and of these four, the red Râjanya and the white Brâhman have ever borne the weightier parts.

The only alternative left for those who doubt that Kshatriya and Râjput are ethnically identical, is to suppose that a red race of warriors, claiming descent from the sun, was suddenly annihilated; and that another red race of warriors, also claiming descent from the sun, as suddenly made their appearance in India to take the vacant place; and, lastly, that all this took place so imperceptibly, that the second race are convinced of their identity with the first, and that the Indian traditions preserve no memory of the change.

To this evidence of race identity, quite conclusive in itself, we may add the additional corroboration of identity of name between the Kshattriyas of ancient India and the Râjputs of to-day. The name Râjput, as already noted, is nothing but an abbreviated or colloquial form of the Sanskrit Râja-putra, or King's son; a son, that is, of the ruling or royal race. And this same name of Râjput, or Râja-putra, for the royal race, as a synonym of Kshattriya or Râjanya, can be traced back, past the period of the Mahâbhârata war and the wanderings of Râma, to the dim, remote days of Vedic India.

## V.

## The Yellow Indo-Chinese.

The facts to be summarised will show, I think, that there are in India three main centres of a dusky-yellow, almond-eyed race which one may, for convenience, call Indo-Chinese. Each of these three centres contains a numerous population, speaking non-Aryan languages, with immemorial institutions of their own, and showing a perfectly distinct ethnical type. It will be further clear that round each of these yellow centres spreads an extensive penumbra, in which the same race-type is preserved, almost or quite unaltered; but with language, customs, and religion, blending more or less with surrounding tongues and faiths

The first centre of the yellow Indo-Chinese race is the country of the Kocch tribe of Kocch Behar, in the north-east of Lower Bengal. The chief authority for the Kocch district is Brian Houghton Hodgson, the most gifted observer, perhaps, who ever tried to unravel the tangled clues of the Indian races. According to Mr. Hodgson, the Kocch tribe falls into three groups, marked by greater or less assimilation in belief

and speech with the tribes that surround them. The first of these three groups contains a large section of the agricultural classes of Behar ; using a vocabulary largely Hindi, or Bengali ; and, nominally at any rate, Mahomedan in religion. Most probably, the Musulmanism of the Bẹhar cultivators hardly goes beyond the name, and is really only a conglomerate of old aboriginal beliefs and practices under a new title. For the faith of the Prophet, the most democratic in India, is always willingly embraced by tribes and classes whose social standing is low or doubtful ; as Mahomedans, they are on a more equal footing with their higher caste Hindu neighbours.

After these professing Musulmans comes the second group of the Kocch race. They form a better class of the inhabitants of Behar ; use a vocabulary even more largely Hindi, or Bengali, and belong to one or other of the better Hindu castes.

The first Kocch group, who are now nominally Musulmans, were most probably low-caste Hindus before their conversion ; so that it may be assumed that, at the time of the Mahomedan invasions, and probably for ages before, the whole of this large and important section of the inhabitants of Behar found a place in the Brâhmanical polity, though distinctly and undeniably Indo-Chinese in race. Not unfrequently one meets with members of the better class in Behar, men of good caste, who use a vocabulary largely borrowed from Sanskrit, and yet have as typical Mongol features, and as pronounced Mongol colour, as could be met with in the streets of Canton. After these two sections, the Mussulman and the Hindu Kocch, Mr. Hodgson describes the third group, the primitive unconverted aborigines, who still retain the title of Kocch—discarded and despised by the two preceding sections of the same race. They still keep their original non-Aryan tongue, and, with it, customs and characteristics which have most probably distinguished them from the earliest days of Indian history.

Mr. Hodgson quotes with warm commendation, from his predecessor Buchanan, an account of the life of the true aboriginal Kocch, which I cannot do better than summarise : The primitive or Pani Kocch live amid the woods, frequently changing their abode in order to cultivate lands enriched by a fallow. They cultivate entirely with the hoe, and more carefully than their neighbours who use the plough, for they weed their crops, which the others do not. The clothing of the Pani Kocch is made by the women, and is, in general, blue, dyed by themselves, with their own indigo ; the borders red, dyed with morinda. The material is cotton of their own growth, and they are better clothed than the mass of the Bengalis. Their only arms are

spears; but they use iron-shod implements of agriculture, which the Bengalis often do not. The Kocch sacrifice to the sun, moon and stars; to the gods of rivers, hills and woods, and every year, at harvest home, they offer fruits and a fowl to deceased parents.

Mr. Hodgson, endorsing this description, points out that the Kocch is essentially agricultural—a most indefatigable and successful tiller of the soil.

Particular attention should be paid to Mr. Hodgson's picture of the ethnical character of the Kocch, as they are a typical example of the races that we have called the yellow Indo-Chinese The Kocch is distinguished, he says, by "less height; less symmetry; a somewhat lozenge contour of face, caused by the large cheek-bones; with less perpendicularity of features in front; a broad, flat face; a short, wide nose, often clubbed at the end, and with round nostrils; small eyes, less fully opened, and less evenly crossing the face by their line of aperture; large ears; thick lips; less beard," and, lastly, "a paler yellow hue."

This description of the oblique-eyed yellow Kocch entirely agrees with the yellow Indo-Chinese type which I found in the western half of the district of Murshidabad and described in an essay on the ethnography of Bengal. The type there described belongs primarily to the Santâl Parganahs in Central Bengal, and constitutes there the second of the three yellow race-centres which have been mentioned. The Santâlis claim to be an ancient race, with traditions of a mighty past, when they had kings and cities of their own, before they were driven from their former home by invaders. They speak a highly elaborate and complicated language, which is entirely non-Aryan, both in vocabulary and grammar; and they still have a large body of traditional songs, handed down from generation to generation. They have a peculiar theogony, with legends of the destruction of the human race by fire and flood, and the birth of the seven original Santâli tribes from the survivors. Later, they had twelve tribes, the added five being deemed inferior; and each tribe contained twelve families: only eleven tribes now exist.

Mr. Hodgson's description of the physical type of the Kocch would fit the Santâli perfectly; but, for the sake of comparison, we may enumerate the characteristics of the Indo-Chinese type as it is found in the districts close to the Santâl Parganahs. These characteristics are: thick, ill-formed features; broad flat nose; small eyes, with inclined axis; low, receding forehead; long upper lip; very prominent cheek-bones; thick lips; coarse, lank hair; scanty beard; and, lastly, a dusky complexion, with a distinct subshade of yellow.

It is curious that this description of the type bordering on the Santâl Parganahs coincides almost verbally with what Mr. Hodgson says of the Kocch; and I think no one will deny that both are pictures of the same race; the same well-defined ethnic type—the yellow, oblique-eyed Indo-Chinese.

As was the case with the Kocch, the pure, Santâli-speaking aborigines of the Santâl Parganahs are surrounded by a penumbra of the same race type who have discarded their original tongue for a vocabulary largely composed of corrupted Sanskrit words; the majority are probably Hindus, though they also include Mussulmans; but these, as we saw in the case of the Kocch, were probably nominal Hindus before they became, by their conversion, at least nominal Mahomedans.

We have, therefore, in this fringe of the Santâl Parganahs, a body of Hindus, undoubted and unquestioned members of the Hindu community, but who are nevertheless, in race and character, equally undoubted Indo-Chinese, with eyes aslant, and yellow skin.

The Santâlis are indefatigable and successful cultivators whenever they get a chance of tilling the soil; and this is especially true of the people of the western highlands of Murshidabad, who, though speaking a form of Bengali, still maintain a quite distinct Santâli type. Their fields are tilled with unceasing industry and untiring skill, and their system of irrigation is carefully designed and admirably carried out.

To turn now to the third chief centre of the yellow men of India, the Sâvaras, or Saoras, of Northern Madras.

The chief authority for this people is Mr. F. Fawcett's description of the Sâvaras, contributed to the Anthropological Society of Bombay. The Sâvaras occupy a mountainous district of two or three thousand square miles in the northern half of the Eastern Ghâts. They have certainly been in the same position for the last two thousand years, for they are described by Pliny as the Savri, and by Ptolemy as the Sabaræ, and are assigned by them to the locality they still occupy. It is quite possible that they occupied the same position four or five thousand years ago, or at whatever date the "Aryan" immigrants entered India.

It is a curious coincidence, greatly strengthening the evidence of the racial unity of the Indo-Chinese tribes, that in describing the Sâvaras of Southern India, Mr. Fawcett uses almost the identical terms which have been applied to the Kocch of Kocch Behar, in the extreme north, and to the outlying Santâlis of Murshidabad. Mr. Fawcett says the Sâvaras are characterised by: "flat faces; thick lips; high cheek-bones;

broad and flat nose; eyes slightly oblique; almost beardless; with very fair, distinctly Mongolian"—that is, yellow—"faces: the men being generally under middle height, spare and well built." The Sâvaras are "excellent and industrious cultivators (to the manner born, like Chinamen)," says Mr. Fawcett, who speaks also of their "Chinese" faces, and their "Chinese" gravity, when at work; thus illustrating, I think, the fitness of the term Indo-Chinese which I have used to describe the general race-type to which they belong.

Mr. Fawcett was greatly impressed with the agricultural skill of these yellow Sâvaras of Madras; "many and many a time," he says, "have I tried to find a place where an extra rice field might be made, but never with success."

It is not too much to say that rice is grown on every available foot of arable ground, all the hill streams being utilised for this purpose. From almost the very tops of the hills, in fact, from wherever the springs are, there are rice fields: at the top of every small area, a few square yards; the front perpendicular revetment sometimes as large in area as the area of the field; and larger and larger, down the hill-side, taking advantage of every available foot of ground, there are fields below fields to the bottom of the valleys. The Sâvaras show remarkable engineering skill in constructing their rice fields, and I wish I could do it justice. "They seem to construct them in the most impossible places, and certainly at the expense of great labour."

Round the pure Sâvaras, as round the other two yellow centres, is a fringe of the same race-type, more or less assimilated in language and religion with their neighbours, one division of whom are Uriya-speaking Hindus. I think, therefore, that I am justified in assuming no further proof to be needed of the existence of three pure and distinct racial centres, in three widely separated regions of India,—Kooch Behar, in the extreme north; the Santâl country in the middle; and the Eastern Ghâts of Madras, to the south—all with marked Indo-Chinese characteristics; all speaking non-Aryan tongues; all of distinct yellow colour; and all remarkable as excellent and successful cultivators.

It may also be considered as proved that each of these isolated groups is really the unassimilated remnant of a much larger racial group, with the same Indo-Chinese characteristics, the same yellow skin, the same agricultural skill; and these large groups, up to the time of the Mussulman invasions, might, with perfect propriety, have been described as irreproachable members of the Brahmanical polity, in spite of their indubitable Indo-Chinese race.

It will be a legitimate conclusion to draw, that this yellow,

agricultural race, forms to-day, and formed most probably, five thousand years ago, or even earlier, a very important element in the population of India; and that, with the gradual growth of the Brâhmanical polity in ancient India, the men of this yellow race were, to a large extent, admitted within the fold as the third caste. In the words of Bhrigu "the twice-born, who derived their livelihood from kine, who were yellow, who subsisted by agriculture, entered into the state of Vâishyas."—Mahâbhârata, Shântiparvan, 6941.

It is interesting to note that in Aitareya Brâhmana (vii., 18), a tribe called Sâvaras, are mentioned as Dasyus. It is almost certain that this is a branch of the race described as the Sâvaras of Madras. If so, then one section of the Dasyus was certainly yellow. In the Mahâbhârata, two tribes of yellow Dasyus are spoken of, the Kirâtas and the Chinas. They are called "golden" or "yellow coloured;" and are compared to "a forest of trees with yellow flowers." [India: What can it teach us. IV.] The former are probably the ancestors of the modern Kiratas of Nepal: the latter are most likely the Chins, who have quite recently suffered one of our "little wars."

The "hundred cities" of the Dasyus are frequently alluded to in the Rig Veda, and this coincides exactly with the tradition I have quoted, of the time when the Santâli race lived further west, and had kings and cities of their own, before they were driven back by powerful invaders.

## VI.

## The Black Dravidians.

In one passage of the Rig Veda occurs the verse: "Indra who, in a hundred ways, protects in all battles, in heaven-conferring battles, has preserved in the fray the sacrificing Arya. Chastising the neglectors of religious rites, he subjected the black skin to Manu" [i, 130-8].

This allusion to the black Dravidians as Dasyus completes the picture of the hostile races the Vedic tribes found in India, and, in part at least, admitted to their social and religious culture.

Bishop Caldwell pointed out many Dravidian loan-words in Sanskrit, and it is likely that the Indo-Chinese tongues furnished at least an equal number. If they introduced many of their own words into the jealously-guarded Sanskrit, the language of the gods, it is quite certain that they introduced even more of their original belief and customs into that curious conglomerate of faiths which sprang up after their admission into the Brâhmanical polity, and which to-day bears the name of Hinduism—a name that indicates a loosely organised social condition rather than any specific practices or beliefs.

It is probable that to the influence of these half-assimilated Dasyus was due, in part at least, the great, though gradual change from the bright Vedic faith to the highly-coloured mythology of the Purânas, and the complex beliefs of the modern Hindus. To trace this gradual remoulding of the Vedic religion, and its passage to the legends of the Purânas, is a work that has employed many workers for many years, and is yet but half completed. But, while the facts of this change have long been acknowledged, it is only quite recently that the cause has been sought in the influence of the older races of India on the "Aryan invaders."

The share of the Dravidians in this influence is already being investigated by competent observers in India with results of the greatest interest; and one cannot but believe that the influence of the yellow Indo-Chinese on their conquerors and allies will be found to be as great, if not greater.

The fullest account of the various peoples who may be conveniently grouped together as the Dravidian race, is found in Dr. Oppert's great work on the Original Inhabitants of India; though there are three or four points in Dr. Oppert's work which will probably need to be largely modified.

The first of these points is, that Dr. Oppert's classification is not strictly ethnical. He does not arrive at a clear ethnical type, distinguished by physical character, and then class as Dravidians all the peoples who closely represent this type. Dr. Oppert arrives at his classification of the Dravidians in quite another way. He takes a large area, including the Deccan and much of Northern India, and calls "Dravidian" all the peoples whose names contain a certain root meaning "mountain," and this root goes through a wide series of modifications.

This is, of course, not an ethnical method of classification at all; and is further liable to two sources of error. The first source of error is, that we are not sufficiently informed whether the names of the various tribes are the names they give themselves, or the names other people give them. If they are the names other people give them, then the classification is entirely artificial; because, on the same principle, we should have to class together the red races of America, the New Zealanders, and all the peoples of India, as the name "Indian" has been given to all of them by other people; to the American Red men, by Shakespeare amongst others; to the New Zealanders by Captain Cook; to the peoples of India, probably first, by the Persians, who spoke of the Haptâ Hendavas, the Seven Rivers of India; then by the Romans, and, lastly, by all Europeans.

And even if the name is given to people by themselves, it is ethnically unreliable; for three or four different race-stocks call themselves English, or French, or German, or Austrian, in spite

of their ethnical differences. So that we cannot, in an ethnical sense, follow Dr. Oppert, when he proposes to use the name Dravidian in this way, to designate a group of peoples in whose name he finds a common element, the root *para*, meaning mountain.

I should be inclined to use the term Dravidian, in an ethnical sense, to designate all the peoples of India who are distinguished primarily by black or nearly black skin, in contradistinction to the nearly white race which forms the nucleus of the Brâhman caste; the yellowish tribes like the Sâvaras and Santâlis; and the red or ruddy tribes which form at least the nucleus of the peoples of Rajputâna. I should, therefore, be inclined to distinguish the Dravidians primarily by colour; and this colour is black, or nearly black.

It will remain to be seen whether we can draw a line between the nearly black peoples who belong, on the one side, to the quite black Dravidians, and those who, on the other side, more probably belong to the yellowish tribes like the Santâlis and Sâvaras. Broadly speaking, we may very likely draw such a line; putting on the one side those who have other characteristics—such as long skull, and hair with flat section—generally found in black races; and on the other those who have other characteristics—such as short skull, and hair with round section, generally found in yellow races.

Thus, we shall be able to form a group of Indian races primarily distinguished by black or blackish colour; and secondarily distinguished by long skull, hair of flat section, and other characteristics difficult to describe without using some rather technical anthropometric system. And to this group of races we may give the name Dravidian, until a better name is found.

The objection to the name Dravidian is, that it has already a quite definite meaning in the science of language covering such languages as Tamil, Telugu, Kanarese, and Malayâlam, which belong to a clearly related and closely knit group; and it by no means follows that the area of these "Dravidian" languages will be precisely co-extensive with the black or blackish "Dravidian" race, so that we shall be using the same word to indicate two different things, a linguistic family and an ethnical family—a group of languages and a group of men—, which are not co-extensive or co-incident.

As the ethnical boundaries of the "Dravidian" race come to be more clearly known, we may find that they do not closely coincide with the linguistic boundaries of the "Dravidian" tongues. It will be inconvenient to have the same name for both; and, as the science of language has prior rights to the word "Dravidian," the ethnologists must find another term for themselves. Perhaps they will adopt the suggestion, due, I

think, to Professor Huxley, to call the black races of India Dasyus, following the old Vedic mention of the "black skin of the Dasyus."

But the question of names is one that may very well be left to the future. This much, however, appears to be quite certain already; first, that we shall have to assign to this black or blackish race most of the peoples of Southern India, and, in all probability, many of the peoples of Northern India also; secondly, that this class will not contain less than a hundred million individuals, and may very possibly contain twice that number. So that we shall have a great ethnical group, containing at least a hundred million individuals; distinguished primarily by black or blackish skin, and secondarily, by long skull, hair of flat section and other characteristics; and this black race will be found to belong in the main to the Indian Peninsula. So much seems already quite clear.

The chief questions for the future to decide are, the more precise extent of this race; the exact degree of length of skull, as compared with other long-skulled races; and the numerical expression of other characteristics, such as facial and orbital index, and so on.

What relation will our long-skulled, black-skinned Indian race, containing not less than a hundred millions, be found to bear to the other races of Asia?

Here, again, data are very scant. We can only say that, so far as our knowledge goes, no very close relation will probably be found between the black Dravidians and any other Asiatic people, with the possible exception of certain peoples in the East Indies; and that we shall probably have to look for the kindred of "the black Dravidians" in some other direction.

For, although the ethnology of Asia is far from being perfectly known, it is still sufficiently known for us to draw a few broad general conclusions; and all these conclusions unite in showing the isolation of the black Dravidians of Southern India. The first broad conclusion we can form as to Asian ethnology is that, out of the five or six hundred millions of Asiatics outside India, probably four-fifths belong to the Chinese, Mongol or Mongoloid races. Among these Chinese Mongol and Mongoloid races, the dominant colour is yellow; they are further distinguished by short, round skulls, and by hair whose section is also round; while very many of them have their eyes obliquely set or aslant.

Now all these characteristics are the exact opposite of those found among the black Dravidians of the Indian Peninsula; and preclude any possibility of close relationship between the two groups, the Mongoloid on the one side, and the Dravidian on the other.

Of the remaining section of Asiatic peoples who are not Chinese, Mongol or Mongoloid, the most important are the Levant group,—Arabs, Jews, Syrians, and the peoples of the Caucasus and Persia ; and none of these show any approach to the type of the black Dravidians of Southern India. So that the isolation of the latter is fairly certain and well established.

We must, therefore, content ourselves for the present, with saying that it seems fairly certain that there is a great ethnical family in Southern India, distinguished primarily by black or almost black skin ; that this ethnical family cannot number less than a hundred million individuals ; and that this great ethnical family is not related to any other ethnical family in Asia, but is isolated and distinct ; so that we must seek for the ethnical kindred of the black Dravidian, if such kindred exist, outside Asia altogether, in some other direction, at present undetermined.

As it has for a long time been conceded that the fourth caste of t e Brâhmanical polity was drawn from this black race, we need not further insist on this.

## VII.

### Caste and Colour.

Thus there is a gradually growing body of evidence which tends to supply an ethnical solution to the most difficult problem of Indian social life—the formation of the four castes in ancient India.

It is becoming more certain that the germs of these four castes were four races, distinct in character and in ethnical type and distinguished most obviously by colour. If this be true, then caste and colour were originally the same thing ; and this view is strongly supported by the fact that only one word varna exists to cover the two ideas in Sanskrit.

It may be objected, however, that it is exceedingly unlikely that ancient India should have been supplied in the beginning with four distinct race-types, each one fitted to exercise the activities of one of the four great castes. The answer to this is, that, if we had had more or fewer racetypes, we should have had more or fewer castes ; if we had had three or six great race-types, we should have had three or six great castes, instead of four ; and that, having four race-types, we could not, in the natural order of things, have had any other formation of ancient Indian Society, any other division of the activities of social life, than we actually have.

Then, again, it will be said that we have simply taken advantage of the old saying : " The varna of the Brâhman is white, the varna of the Kshattriya is red, the varna of the Vâishya is yellow, the varna of the Shûdra is black," and have hung on it an ethnical theory, whereas, in the beginning, it had no ethnical meaning at all.

Now, in answer to this, it may be asked: If this old saying had not an ethnical meaning how did it arise? What meaning had it? We all know the later interpretation that these colours are typical of the three gunas,—"sattva, rajas tamas,"—"goodness, passion, darkness," the three primal potencies of the universe according to an old philosophical school. But then, if three qualities, we should have had three colours and three castes, not four. How, then, did the discrepancy arise? But the truth is this explanation of the four colours is an after-thought ; a metaphysical subtlety of the school which first developed the doctrine of the three great universal potencies, goodness passion, and darkness.

Then, again, if it be objected that these four colours have only a symbolic and not an ethnical meaning, it lies with the objectors to show why these colours and no others were taken ; why should the Brâhman's colour not be violet or green ; and so with the others. Why, in fact, out of all colours only four should be chosen, and these four by no means the most striking, but happening, curiously enough, to be the four most marked ethnic colours ; the four most pronounced colours of skin.

Yet, again, it may be objected that the confluence of four races of such pronounced difference of ethnic tpye in a single country so limited in extent as was the India of the four castes, the Aryâvartta of Manu, is in itself so unlikely and improbable an occurrence, that any argument based on this supposition becomes infected with unlikeliness, and should, therefore, be rejected beforehand on the ground of extreme improbability.

This argument is a serious one, and I must own that it had considerable weight with me, and for a long time tempted me to reject the ethnic theory of the origin of the four castes. It is not unanswerable, however, this objection, that four races, white, red, yellow, and black, would hardly, by any possibility, come together in a limited space and form a single community. The answer, indeed, is a very simple one. This very unlikely occurrence actually occurs ; and we can point to its occurrence in several different corners of the globe at the present moment.

Let us take the case of the United States. What is the broad ethnic characteristic of the United States? The variety

of races, certainly. Into what groups do these races fall? We have first of all a great group of white races; and we know that these white races found a red race of warriors and hunters in possession; and that this red race gradually withdrew before the advance of the white race; though there is much evidence to show that there has been no very great decrease in population in the red races, taken as a whole, although they have disappeared entirely from several localities.

Then an ethnic factor of considerable importance in the United States, as well as a political factor of great gravity, is the presence of a black race, the African negroes; originally slaves, but now freed from servitude, and gradually, so far as they have any pronounced occupation, finding their way into various forms of inferior service. Lastly, as another political as well as ethnical factor, we have the presence of the yellow Chinese. Their pre-eminent race genius for industrious toil and thrift, especially for most successful agriculture, is asserting itself The work of selective race genius—which one has to touch on again and again when writing of India—is already making itself felt. The Chinese genius for toil will either triumph and conquer for itself an undisputed field of activity—in fact, a caste, becoming gradually hereditary—, or the yellow race, with its genius for agriculture, will be eliminated from the American polity.

So that, in defiance of the theory of probabilities, in spite of all unlikeliness, we have in the United States to-day a confluence of four races, the white Europeans, the red Indians, the yellow Chinese, and the black Negroes.

Then, again, adhering strictly to the ascertained race genius of these four types, we might repeat the words of Manu and say: The dharma, or genius, of the white European is for order; the genius of the red Indian is, or rather was, for war; the genius of the yellow Chinaman is for agriculture; the genius of the black Negro is for servitude, whether as slavery, or service.

If these four races were more equally balanced—not so much in equality of numbers as in proportionate force, so as to set their race genius at the best advantage—,we should have exactly the condition of things ethnically from which, I believe, the Châturvarnya, or system of four castes, in ancient India, sprang. Nay, more, we should have the strongest possibility that the system of four castes would arise again in the United States to-day, with all its isolation of activities, with all its hereditary limitations, and with all the prejudice and ignominy

attachings to mixed races, which attached to mixed races in the Châturvarnya of ancient India.

So close is this parallel, so close are the ethnic resemblances between the white, red, yellow and black races which we see so clearly in America to-day and the white, red, yellow and black races which, I believe, can be shown to exist in India to-day, and to have existed in India thousands of years ago, when first the Châturvarnya, or system of four castes, was developed; so close are these resemblances, that I may be accused of having framed the theory of the four castes and four colours in ancient India, if not on the American constitution, at least on the ethnic constitution of the United States.

I can only protest that the analogy with the United States, and the four races there, only struck me after I had reached clearly defined conclusions as to the four races in modern and ancient India, proceeding along the lines of purely ethnical evidence.

But in any case, if such an objection were made, the burden of proof would lie with the objector, to show why, if the possible effects in the United States and the recorded effects in old India are so nearly identical, the causes should not also be identical; as the presumption is that like effects imply like causes.

There are other analogies of the confluence of four races, white, red, yellow, and black, besides the United States.

Let us take the case of South America. Here the ethnic conditions, though very similar to those of the United States, are by no means identical. There is, first, a white race, European, it is true, but of a different ethnic division or sub-race, generally speaking, from the European races which make up the bulk of the white population of the United States. We need not enter into these details of European ethnology, beyond merely stating the fact that at least four ethnic stocks, or sub-races, are counted by the best European ethnologists; it being still an open question whether all or any of them are true Aryans; no satisfactory meaning being, indeed, attached to this title of Aryan so far as Europe is concerned. Then, there are red races in South America, connected, no doubt, with the red races of North America; just as the white races of South America, chiefly of Spanish and Portuguese origin, are connected, more or less closely, with the white races, chiefly Teutonic, which preponderate in the United States.

The ethnology of America is, however, so little developed, that any precision as to the relationship and ethnic character of the various sub-races of the red race is still impossible. It is only safe to say that the red races are still very largely

represented in South America, and appear to be either stationary or increasing in numbers, but by no means dying out.

They amount, perhaps, to some twenty millions; and have fought doggedly and desperately against their Spanish and Portuguese invaders, whom they appear to be either driving out or absorbing, so that it would seem that in South America the red race may be destined to regain political predominance, to assert their genius for power, as they have for centuries asserted their genius for war.

These are, however, very uncertain speculations. What is certain is, that, in South America, the red race is largely represented.

Perhaps the continual wars and revolutions in South America are an index of this red race's warlike character; at any rate, they are the index of a transition epoch, after which a fresh balance will be struck between the races.

Then we have in South America yellow races, not only Chinese, but also it would appear indigenous yellow races, gradually shading off into the red race stock. The true connection between the red and yellow races may be one of the discoveries of ethnology in the future. There are also, it is said, black races indigenous to South America. There is, it is quite certain, a fair percentage of African negroes in certain parts of South America; so that, in any case, our group of four races, white, red, yellow, and black, is complete in South America, as in the United States. Then, again, in Australia, there are white Europeans; red or ruddy Polynesians; yellow Chinese, whose race genius is asserting itself there, as in the United States; and black, or very dark brown aborigines; for there is evidence to show that the "black fellows" are not really quite black. In the Straits Settlements, also, there are white Europeans, red Karens, yellow Chinamen and yellowish Burmans; and, lastly, black Tamils and other Dravidians.

It is quite clear, then, that the confluence of four races, white, red, yellow and black—is by no means so impossible, or improbable, as it at first seemed, but is, on the contrary, a fairly common and ordinary occurrence—rather the rule than the exception.

In this way we may gradually show the broad probabilities for the case of "Caste and Colour" in ancient India. They do not yet amount to quite rigid proof; but I think they already approach the legal criterion of sufficient evidence—the amount of likelihood that one would act on in ordinary life.

*Acknowledgment.*

Various aspects of this study have been discussed in separate articles in the *Asiatic Quarterly Review*, the *Calcutta Review*, and the *Madras Mail*. My best thanks are due to the Editors for permission to bring the substance of these fragments together in a single study.

C. J.

## *Errata*

In the previous portion of this article that appeared in July 1895,

Page 108 line 23 from top, for " treaties " read " treatises."
" 109 " 3 " insert a comma after " supposed. "
" 121 " 3 from bottom, dele the comma after " in."
" 122 " 25 from top for " পারশবোগ্রৈকরণানাম্ " read " পারশবোগ্রকরণানাম "
" 125 foot-note, line 6 from bottom, for " castee " read " caste."
" 126 line 6 from top, for " শ্রীকয়ণেভ্যো নমঃ " read "শ্রীকরণেভ্যো নমঃ"
" 132 below line 12. for " Kanyakulya" read " Kanyakubjya."
" " foot-note, line 8 from bottom, for " Uttara Radhá is " read " Uttara Radhis."
" 135 line 9 from bottom, for " প্রষ্টৃ ৎ " read " প্রষ্টৃৎ "
" 136 " 5 from top, for " জ্ঞাতা " read " জ্ঞাত্বা "
" " " 10 " for " পদ্যমানীয় " read " পাদ্যমানীয় "
" " " 17 " for "শ্রোতুমিচ্ছমি" read "শ্রোতুমিচ্ছামি"
" 137 " 6 from top, after " Adisura " insert " of the Ambastha family."
" 141 " 12 from top, for " Bengal " read " Banga."
" 146 " 5 from top, for " Kayastha " read " Kasyapa."

# ART. VII.—BENGAL: ITS CASTES AND CURSES.

## INDEPENDENT SECTION.

*(Continued from No. 201, July 1895.)*

## THE MIXED CASTES—*(Continued)*

### *The Ambasthas, or Vaidyas.*

THE next mixed caste in the *anuloma* order, as stated by Manu, is the Ambastha, born of Bráhmana father and Vaisya mother (Manu, Chap. X, v. 8). The profession of the Ambasthas is medicine (Manu, Chap. X, v. 47), and they are identified with the Vaidyas of Bengal. It is said that the Vaidyas, as a caste, do not exist in places outside the geographical limits of Bengal, but no cause that we know has yet been assigned for this assertion. According to Mr. Risley, the term Vaidya is not distinctive, and may denote any person who practises medicine; * but it must be allowed that in Bengal, at least, it denotes a specified class, or caste, whose profession is healing or curing disorders. Originally, the term Vaidya was no doubt indicative of a particular caste, and the use of the word by the poet Kalidása, in a stanza of his celebrated *Sringáratilakam*, † coupled with the fact that in ancient times people of other castes, except the Ambasthas or Vaidyas, never practised medicine, forces us to come to this conclusion. And if this position be conceded, it follows, as a matter of course, that the term Vaidya, though not distinctive at the present age, was, in fact, so in past times. But the question arises, how it is that the Vaidyas, as a caste, do not exist in the North-Western Provinces or Bihar. The Rev. Mr. M. A. Sherring, in his "Hindu Tribes and Castes" of the North-Western Provinces, does not mention the Ambasthas or Vaidyas, because he does not find any caste in those provinces passing by that name. There the Bráhmanas, or people of other castes, practise medicine. It is very probable that when the Vaidyas became kings of Bengal, ‡ a

---

* Risley's "Tribes and Castes of Bengal," Vol. I, page 46.

† ক্ব ভবংশ্চলিতোঽসি বৈদ্যকগেহং বিভক্ত রুজাম্, শাস্ত্রায়—

*Q.*—Where art thou going brother? *A.*—To a Vaidya's house. *Q.*—For what purpose? *A.*—For cure of maladies.

‡ Much controversy has, of late, been carried on respecting the caste to which the Sen kings of Bengal belonged. From the oldest times up to the year when Dr. Marshman wrote his History of Bengal, the Sen kings were accepted as belonging to the Vaidya caste; but Dr. Rájendralála Mitra, who wanted to help the Káyasthas in their arrogation as Kshatriyas, started a theory that they were not Vaidyas but Kshatriyas; and as the Kayasthas of the present day arrogate to themselves that they represent the Kshatriya

great majority of them had already left the Upper Provinces and settled in Bengal; and when those provinces were conquered by the Mahomedans, the rest of the Vaidyas, or, at least, a portion of them, naturally left those provinces to live under the sway of kings of their own caste. Besides, an exotic system of medicine, *viz.*, the *hakimi* system, was soon introduced in those provinces, which was eagerly pursued by the Hindus; and as the conquest of the country by the Mahomedans cut the gordian knot of the caste-system, and people of one caste commenced following with impunity the profession of another, the Bráhmanas and people of other castes took to medicine. In the absence of anything like an authentic history, our opinion as regards the absence of the Ambastha element, among the people of the Upper Provinces, must be accepted as correct. Besides, it is not altogether unnatural that the introduction of the *hakimi* system of medicine and surgery should soon have driven the Vaidyas of the country to the back ground, and compelled them to abandon the art which their forefathers had pursued, and to adopt some other profession for gaining their livelihood. In three or four generations they, no doubt, passed under the designation of some profession caste, and hence it is that the name of Vaidya, as indicative of a distinct caste, is not found in the North-Western Provinces. In his Article on the Lálá Káyasth, Mr. Risley mentions (Vol. I, p. 443) the Amastha as a sub-caste who "may possibly, as Mr. Crooke suggests, be

---

class in Bengal, the Sen kings were really Káyasthas. We have shown before that Dr. Mitra's theory, absurd as it is, has not been accepted by the People of Bengal. Mr. Dutt, in his History of Civilisation in Ancient India, assumes that they were probably Kshatriyas or Vaisyas (Vol. III, p. 250), and suggests that "instead of declaring that the ancient kings were Vaidyas and came to Bengal with pestle and mortar, ointments and drugs, it would be historically more intelligible to urge that the descendants of the ancient Vaisya or Kshatriya kings of the Sen dynasty have now become merged in the modern Vaidya or medical caste of Bengal." We cannot too strongly reprehend the tendency which Mr. Dutt and others have shown in trampling under feet recorded facts and traditions, and in starting brainless theories of their own to pass as historians. Facts are more wonderful than fiction, and the supposition that the "noble dust of Alexander should be found stopping a bunghole" is not more to be wondered at, than that a common herdsman of Spain should rise to the highest power in the state and sway over the destiny of Peru, or that a Vaidya, leaving aside his pestle and mortar, ointments and drugs, should assume the sovereign power in Bengal. All the records which have come down to us show decisively that the Sen kings of Bengal were Vaidyas, or Ambasthas. A representative of the family of Ballála Sen, Babu Girish Chandra Sen, was the late head clerk of the Backerganj Collectorate, and the family still lives at Bikrampur, and is reckoned as a member of the Ambastha class. Will Mr. Dutt still say that the forefathers of this unknown representative of the Sen dynasty were Kshatriyas or Vaisyas, and that he himself, or one of his ancestors, some time after the downfall of the dynasty, renounced Kshatriyaism, or Vaisyaism, and passed for a Vaidya?

the modern representatives of the Ambastha tribe said to be descended from a Bráhman father and Vaisya mother." So it is possible that the Vaidyas (Ambasthas) in Bihar, at least, have merged in the Káyastha class. It is possible also that the Ambasthas of the North-Western Provinces have either similarly merged in some other caste, or else exist as a separate profession caste; and unless one or other of these suppositions is accepted, it is not possible to account for the absence of an entire caste element in the North-Western Provinces and Bihar where, no doubt, it existed before, as it does now in Bengal.

Mr. Risley mentions a group of Vaidya families (Vol. I, page 47) who reside in "the districts of Sylhet, Chittagong and Tipperah, who intermarry with Káyasthas and Sundis, the children in each case following the caste of the father." . . . The practice "is said to have arisen from the reluctance of the Vaidyas further west to give their daughters to men who had settled in the country east of the Brahmaputra. Failing women of their own caste, the latter were compelled not only to marry the daughters of Káyasthas, but to give their own daughters in return. This interchange of women is said to extend even to the comparatively degraded caste of Sundi, and it may be for this reason that the Chittagong, Tipperah and Sylhet Vaidyas are cut off from community of food with the other sub-castes." Precisely the same cause must have been in operation to obliterate the Ambastha class from the North-Western Provinces. Otherwise, it is impossible to account for the absence from those provinces of an entire class of people who are distinctly mentioned by Manu, and who must have existed there as a distinctive caste several centuries ago, as they exist now in Bengal.

The Ayurveda, which is studied and practised by the Vaidyas of Bengal, is probably as ancient as the Vedas themselves. It is considered to be an Upa-Veda (*i.e.*, a sub-Veda) of the great Rig-Veda,* wherein the two Asvins twins born of Vivashat, the sky, by Saranyu, the dawn, are spoken of as great physicians. The ancient Ayurveda does not probably exist in the form in which it was practised in the time when the Aryas first settled in A'ryávartha, but must have been considerably improved and modified in later times by Charaka, Susruta and other writers. In the *Nádi-Vijnanam* of Kanada we are told that the god Mahesha only knew the A'yurveda, that the *Dhátá* (Brahmá) learnt it from him, and Turasát (Indra) learnt it from Brahmá, and that Kanáda learnt

* Each of the four Vedas has an Upa-Veda of its own. Thus—
The Ayurveda is the Upa-Veda of the Rig-Veda.
The Dharma-Veda is the Upa-Veda of the Yajur-Veda.
The Gandharva-Veda is the Upa-Veda of the Sáma-Veda.
The Arthashástra is the Upa-Veda of the Atharva Veda.

it from Indra. This means nothing more than that Kanada, like any other A'rya, ascribed the shástra which he propounded as the gift of gods. Charaka and Susruta give a different version, the former stating that Brahmá first imparted the knowledge of A'yurveda to Prajápati, that Prajápati imparted it to the two Asvins, and the Asvins imparted it to Indra, from whom Bharadvaja learnt it and imparted it to six Rishis of whom Agnivasa was one, and the latter stating that Indra imparted the knowledge to Dhanvantari, who again imparted it to eight Rishis of whom Susruta was one.

We are not told to what caste Kanáda, Charaka and Susruta belonged, but we believe that they belonged to the Ambastha or Vaidya caste, for the simple reason that under Manu's law each caste had a profession assigned to it which was seldom departed from. Manu expressly tells us that the Ambasthas practised medicine, and we cannot suppose with Mr. Dutt that the Vaisyas practised it. The Vaisyas had no concern with medicine: indeed, not a single Hindu medical work can be shown to have been compiled or written by a Vaisya, and Mr. Dutt is not justified in detracting the glory of cultivating Hindu medical science from the Ambasthas and ascribing it to the Vaisyas, whose sole concern was cultivation of land, tending of cattle, and trade.

Manu's account of the origin of the Ambasthas (Vaidyas is given in the Skanda Purána in the garb of a fable which runs thus: Once on a time Gálava Rishi, while on a pilgrimage became thirsty and begged water of a damsel who was just then carrying a pot (কলশ) filled with water. The girl gladly gave him water to drink and was blessed by the saint with the promise of a son. The girl replied that she was the daughter of a Vaisya, that her name was Bírabhadrá, and that she was not yet married. The Rishi could not revoke the blessing once uttered. When asked by the father of the maiden to accept her hand, Gálava declined the offer, saying that, as she had saved his life by giving him water, he looked upon her in the light of his mother. The other Rishis who were present on the spot then made a child of *Kusa* grass (*Poa Cynosuroides*), and placing it on the lap of the maiden began to utter Vedic *mantras*. By the power of the Vedic *mantras* the bundle of *Kusa* grass became a living child, and thus was Amritachárya Dhanvantari born. He was called Vaidya, because he owed his life to the Vedic *mantras*. He was also called Ambastha, because he had no human father, and therefore belonged to the family of his mother (Ambá). Dhanvantari gave birth to three sons, who became the fathers of Sen, Dás, and Gupta families.

The Vaidyas are commonly divided into four classes, *viz.*,

Radhi, Bangaja, Várendra and Panchakoti, and their social position in Bengal is next to the Bráhmanas. There is a sort of Kulinism among them, but no one ever loses it for ever. Ballála is said to have* introduced the hypergamous divisions of Kulin, Vansaja, and Maulik. A Kulin must marry his daughter to a Kulin, but he himself may marry either a Kulin or a Vansaja woman. If he marries a Maulik woman, his family is, to a certain extent, dishonored, but the stain may be wiped out by marrying his sister or daughter to a Kulin. Hence, the saying 'Rising and falling is the Vaidya's lot, provided the original stock remains sound.'"

The Vaidyas are a respectable class of people in Bengal, and many of them have distinguished themselves in the past as good Pandits and able physicians. They have carried the art of feeling the pulse to such perfection as to excite the admiration of everybody. It is related of the late Kaviraj Gangadhar, of Murshedabad fame, that he pronounced a case quite hopeless, when a distinguished European physician who examined every internal organ of the patient by percussion and auscultation, and by all the appliances of modern European medical science gave an opposite verdict. In a few days the patient died, as diagnosed by the Kaviraj, and the European doctor stood aghast at the utter inutility of all his art.†

We have said in the Vaisya portion of our article that the Vaidya King Ballála Sen made connection with a girl of the *Dóma* caste, which ended in disruption between him and his son. Those Vaidyas who sided with Lakshmana Sen, threw off the *paita* (sacred thread) under his orders. They remained without *paita* for more than seven hundred years, when, about a hundred years ago, they resumed it through the influence of Rája Rájballabha, steward to the Nawab of Murshedabad.

The following gotras are prevalent among the Vaidyas :—

| | | |
|---|---|---|
| A'dya. | Ghritakausika. | Sávarna. |
| Alámálaka. | Hingu. | Saktri. |
| Angirá. | Kásyapa. | Sálankáyana. |
| A'treya. | Kausika. | Sandilya. |
| Bharadvaja. | Krishnatreya. | Vaishvanara. |
| Dhanvantari. | Madhukulya | Vasistha. |
| Dhruva. | Márkandeya. | Vá'sya. |
| Gautama. | Maudgalya. | Vishnu. |

* Risley's "Tribes and Castes of Bengal," Vol. I, p. 48

† This is not the proper place for carrying on a discussion of the sort. We have cited one example only to show that the Kaviraji system is not to be trifled at. Instances are also within our knowledge of cases pronounced hopeless by European doctors, but successfully cured by Kavirajes. Europeans do not give a sufficient trial to the A'yurveda shastra. Those of our readers who wish to know something of the A'yurveda shástra may profitably read Dr. Royle's essay on the antiquity of Hindu medicine, and Dr. Wise's Review of the History of Medicine, published in London in 1867.

The family titles of the Vaidyas are—Aditya, Chandra, Dás, Datta, Dhár, Gupta, Deb, Indra, Kar, Kundu, Nandi, Rája, Rakshita, Sen, Soma. Of these Dás, Gupta and Sen are reckoned as Kulins.

## Other Mixed Castes.

The next mixed caste, as enumerated by Manu, is Nisháda, also called Párasava, born of Bráhmana father and Súdra mother, but it is not possible to identify this class of people in Bengal. We must, therefore, bid adieu to the old legislator and describe the mixed castes as we find them in our time. In doing so, we will not follow any order as respects their origin or birth, or pretend to claim precedence for any of them.

1. Kaivarttas.—These are divided into two classes, *viz.*, Dás and Návik. Those who pursue agriculture, or work as servants, are called Haliyá* Kaivarttas (Dás), while those who live by fishing and plying boats are called Jeliya† Kaivarttas (Návik). The Kaivarttas, in the time of Ballála Sen, were a people whose water could not be touched by pure castes, but he promoted their position and enrolled them among those classes of people whose water could be touched. An incident happened which proved favourable to the Kaivarttas. It is stated that, once on a time, King Ballála passed orders to behead his own son Lakshmana Sen, who, on hearing the cruel sentence, at once fled away. But the wife of Lakshmana Sen played a stratagem to soften the mind of her royal father-in-law. She wrote the following couplet in Sanskrit on the front wall of the mansion in which Ballála used to perform his daily *púja*.

পতত্যবিরতং বারি নৃত্যন্তি শিখিনো মুদা।
অদ্য কান্ত কৃতান্তোঽবা দুঃখশান্তিং করোতু মে॥

The rains are falling without rest,
The peacocks dance with joy;
To-day my love, or death at best,
My sorrows shall destroy.

The couplet attracted the attention of Ballála, and at once produced a feeling of mercy in his mind towards his

* From *hál*, a plough.

† But those Kaivarttas, who live by fishing, call themselves *Malo* as distinguished from Jeliyas (fishermen), who sprang from the Chandála caste.

The Jeliyas catch fish and sell to Pánjaris, who again sell the same in markets. The Pánjaris make the best of the bargain and are never in want while the Jeliyas are ever so. Hence, the proverb—জেলের পেঁদে টেনা, পাঁজারির কানে সোনা।

son. He immediately ordered his boatmen to find out his flying son and produce him in his presence. The boatmen, who had probably aided the prince in his flight, and knew his whereabouts, soon launched their boats and brought the prince back before Ballála, who revoked the sentence of death passed on him and pardoned him in the presence of all. He then asked the boatmen what favour they wanted for the good service rendered by them. The boatmen, with one accord, said that they wanted only to pour water at his royal feet and nothing more; that is they wanted to be reckoned among those classes of people whose water was considered pure and fit to be touched by people of high castes. The king granted their request, and enrolled them among those classes of people whose water could be taken by high caste people, but the *purohitas* assigned to perform their religious observances were Vyasoktra Bráhmanas whose water is not considered pure.

"The social status of the Kaivartta is not altogether easy to determine, as the fisher sub-castes would necessarily occupy a lower position than purely agricultural groups. The Haliya Kaivarttas are usually allowed to smoke from the same *hookú* with members of the Nava-Sákha, and this fairly marks their position as standing first below that group. The same privilege is not accorded to Jaliya Kaivarttas. At present Bráhmanas will not take water from the hands even of the Haliya sub-caste; but it seems likely, as time goes on, that this sub-caste will rise in social estimation, and will altogether sink the Kaivartta, so, that eventually, it is possible that they may succeed in securing a place with the Nava-Sákha, an elastic group, which has already been expanded beyond its original limits."* We are quite confident that this calculation of Mr. Risley's will not be realised at all.

The Kaivarttas are an ancient people who, according to Manu, were born of a Nisháda father by an Ayogava woman (Manu, Chapter X, verse 34).

In Dacca, Maimensing, and other places of Eastern Bengal there is a class of Kaivarttas who work as servants and who style themselves Parásara Dás. They claim to be the descendants of the Kaivartta in whose house Satyavatí, the mother of the great Vyása, lived.†

* Risley's "Tribes and Castes of Bengal," Vol. I, p. 382.

† The following story regarding Satyavati is related in the epic of Mahabhárata. Matsyagandhá [*literally* matsya=fish, and gandha=odour or smell (*fem.*)] was found in the womb of a fish and brought up by a fisher man (a Kaivartta) as her own daughter. Her whole body smelt strongly of the odour of fish. In youth she became a very beautiful damsel, and was appointed by her father to ply a ferry on the river Jumna, to carry over Munis and Rishis from one bank of the river to the other. It so happened that Parásara Muni, who was returning from a pilgrimage, arrived at the

The family titles of the Kaivarttas are—A'daki, A'rash, Bág, Bardhan, Bárik, Bera, Biswás, Boral, Chaudhuri, Dás, Gharui, Giri, Haladhar, Háldár, Jáná, Kundu, Láhá, Maiti, Mallik, Mandal, Mánji, Mánná, Mete, Naskar, Pare, Pátnaik, Pátra, Pradhán, Rojá, Sarkár, Sen, Sántra, Sasmal.

2. Goálás. This caste prepares *dahi* or *dadhi* (curds), butter, *chhena* (ছেনা), which are accepted by everybody. Their avowed profession in the cities and other large towns is the supply of milk from house to house. The correct name of the caste is Gopa (meaning literally one who tends cows), Goálá being a corruption of the Sanskrit word 'gopala,' which conveys the same meaning as the word 'Gopa.' In Bihar and Upper India the name of the caste answering to the profession of the Goálás of Bengal is A'bhíra or A'hu. In Orissa it is Gauda Goálá. Manu says that the Abhíras are born of a Bráhmana father by an Ambastha female (Manu, Chapter X, verse 15). Lassen, on the authority of Ptolemy, describes the Abhiras as a non-Aryan pastoral race dwelling near the mouth of the Indus.*

There are many sub-divisions of the Goálá caste. Those who deal only in milk, *dadhi*, &c., are now everywhere reckoned among those classes of people whose water is considered fit to be touched by people of higher castes. Mahárájá Krishnachanda Ráya was the first to admit them to this privilege. From his time these Goálás carry on the profession of *Mayrá* in certain places. Those Goálás who brand cows with a *kánti* or hook, are called Bhoga Goálás, whose water is not touched by people of pure castes.

The family titles of the Goálás of Bengal are—Bárik, Chomar, Dháli, Ghosh, Jana, Mandal, Parámanik.

3. Sutradhars, or Chhutars. These form the carpenter caste of Bengal. Their social position is very low. No one of the pure castes will ever take water touched by them, or smoke from the same *hookú* with them. According to the Brahma Vaivartta Purána, the Sutradharas are said to be descended from Visva-

spot and saw the girl. The Muni at once became enamoured of her and proposed to pass an hour of happiness with her. The girl humbly told the Muni that she belonged to a low caste, that she was unmarried, and that the odour of her body was nauseating to every one. The Muni blessed her and instantly the sweet smell of lotus from her person scented the air. The Muni took her to an island in the river, and, to escape detection, created mists, which enveloped the place like a thick cloud. He then satisfied his desire and blessed the maiden that she would become a queen. The result of this connection was the birth of the great Vyasa, the reputed author of the Vedas, the Mahabharata and the Puránas. Her real name was Satyavati. She afterwards became, as predicted by the Muni, the queen of king Santanu, of the Kaurava dynasty.

* See Wilson's "Indian Caste," Vol. I, p. 57, and Risley's "Tribes and Castes of Bengal," Vol. I, p. 282.

karmá by a Súdra woman, and were degraded by the curse of the Bráhmanas whom they did not readily supply with wood necessary for a burnt offering. According to Manu, an Ayogava is the offspring of a Súdra by a Vaisya woman, and his duty or profession is assigned by the great legislator to be carpenter's work. Being a *pratiloma*, or born in the inverse order, an Ayogava is naturally looked down with contempt. But we are not quite sure that the present Sutradhar caste of Bengal represents the Ayogava caste of Manu.

The family titles of the Sutradhars of Bengal are—Datta' Dé, Kar, Mistri, Kundu. Pál.

Besides the mixed castes named, there are many others existing in Bengal. It would be a tedious task to treat them in detail, which would exhaust the patience of our readers. We, therefore, simply name them below and show against each name the avowed profession of the caste :—

| | | | |
|---|---|---|---|
| 4 | Svarnakár (shekra) | ... | Preparing gold and silver ornaments, &c. Principally cultivation of land. |
| | Kole | | *Uncertain.* |
| 7 | Gundi (গুঁড়ী) | | Fishing. |
| 8. | Gandar (গাঁড়ার) | | Preparing and selling *chipitok* (চিপিটক বা চিঁড়ে) |
| 9 | Karanga ... | | Ditto. |
| 10. | Kán (Kinnaras) | | Music. |
| 11. | Kandra (কাঁড়রা) | | Preparing articles of bamboos ticks. |
| 12. | Koda (কোড়া) | | Digging earth. |
| 13. | Kaora ... | | Tending and selling pigs. |
| 14. | Kapáli ... | | Preparing and selling hemp thread. |
| 15. | Konch .. | | Fishing and boat-plying |
| 16 | Káhár ... | | Menial service. |
| 17. | Teor (Kájvansi) | | Selling fish and manufacturing bricks. |
| 18. | Duliya . | | Palki-bearer |
| 19. | Dhopa (Rajak) | | Washing clothes. |
| 20. | Chásá Dhopá | | Principally cultivating land. |
| 21. | Nalé ... | | Weaving gunny cloth, also matting. |
| 22. | Nudi (নুড়ী) | | Principally dealing in shell-lac and preparing chud (চুড়ী |
| 23. | Paliyá ... | | Principally selling milk, *dadhi*, &c. Sometime weaving cloth also. |
| 24. | Pátuni . . | | Ferryman. |
| 25. | Pode ... | | Principally selling fish. |
| 26 | Chunari ... | | Principally lime-burner or worker in lime, as plasterer, vendor of lime ; also *tom-tom-willá.* |
| 27 | Chandála (Nama Sudr | | Variety of professions, principally fishing and boat-plying. |
| 28. | Bháskar ... | | A small caste of stone-cutters who make idols of stone, wood or metal. |
| 29 | Dómá ... | | Preparing articles from bamboo. |
| 30. | Doklá ... | | Tending pigs. |
| 31. | Jugi .. | | Weaving. |
| 32. | Bauri ... | | Palki-bearer, also selling vegetables growing in ponds and lakes. |
| 33. | Bágdi .. | | Selling fish and carrying palanquins. In some places tending hogs and pigs. |

| | | | |
|---|---|---|---|
| 34. | Bediya ... | ... | Snake-catcher and player. Collecting medicinal plants and curing snake-biting. |
| 35. | Sundi (Saundika) | ... | Distilling and selling rum and other intoxicating liquors. |
| 36. | Muchi or Chamar | ... | Dealing in leather. |
| 37. | Hadi ... | ... | Clearer of night-soil. |
| 38. | Mehtar ... | ... | Tending hogs and pigs. Also carrier, clearer of night-soil. |
| 39. | Murdafarás | ... | Preparing funeral piles, &c. |

In the list given above, names of such castes or tribes as are, properly speaking, not considered Hindus, are given solely on account of the service they render to the whole community of Bengal. There are also several other minor castes, such as Baiti, Nuniya, Savar, &c., who have been omitted. We do not profess to treat all the castes of Bengal as they exist at the present day. Our object is simply to trace the true origin of some of the high caste people of Bengal, the status they occupy in the scale of society, the influence they exercise on the Hindu society of Bengal, and the curses that flow from a blind adherence to the customs and usuages which sprang up on the decline of Buddhism and on the subjugation of the country by Islam.

In the next section we will give very briefly the results of the Census Operations in Bengal in 1891.

## Population of Bengal.

The population of the provinces within the Lieutenant-Governorship of Bengal, including the Feudatory States, has been ascertained at the census taken on the night of the 26th February 1891, to have been on that date 74,643,366 persons, of whom 37,236,485 were males and 37,406,881 females.* The following Table shows the distribution of the entire population in 1891 according to different religions, as compared with the figures recorded in 1881 :—

| | 1891. | 1881. |
|---|---|---|
| Hindus ... ... ... ... | 47,821,468 | 45,452,826 |
| Musalmans ... ... ... | 23,658,347 | 21,704,724 |
| Animistic ... ... ... ... | 2,753,061 | 2,055 822 |
| Buddhists ... ... ... ... | 194,717 | 155,809 |
| Christians ... ... ... ... | 192,484 | 128,135 |
| Jains ... ... ... ... | 7.270 | 1,609 |
| Brahmos ... ... ... ... | 2,546 | 788 |
| Jews ... ... ... ... | 1,448 | 1,059 |
| Sikhs ... ... ... ... | 417 | 549 |
| Parsis ... ... ... ... | 179 | 156 |
| Minor ... ... ... ... | 32 | .. |
| Not returned ... ... ... | 11,397 | 35,404 |
| Total ... | 74,643,366 | 69,536,881† |

* See Resolution passed by the Government of Bengal, Financial Department, Miscellaneous, dated Darjeeling, the 12th July 1893.

† In Chapter IX, page 144 of Vol. III of Census of India, 1891, the total is put down as 69,536,861 which appears to be a clerical mistake.

The Lieutenant-Governorship of Bengal is composed of the following grand natural divisions of the Provinces, *viz.* :—

| | | |
|---|---|---|
| Bengal Proper | ... ... ... | Northern Bengal.<br>Eastern Bengal.<br>Western Bengal. |
| Bihar | ... ... ... | North Bihar.<br>South Bihar. |
| Orissa. | | |
| Chutia Nagpur. | | |

Bengal Proper is divided into the following fiscal divisions. with names of districts comprising each division :—

| | | |
|---|---|---|
| Burdwan Division | ... | Burdwan, Bankura, Birbhum, Midnapore, Hugli, Howrah. |
| Presidency ,, | | 24-Parganas, Calcutta, Nadia, Jessore, Murshedabad, Khulna. |
| Rajshahi ,, | .. | Dinajpore, Rajshahi, Rangpur, Bogra, Pubna, Darjeeling, Jalpaiguri. |
| Dacca ,, | ... | Dacca, Faridpur, Bakharganj, Maimensing. |
| Chittagong ,, | ... | Chittagong, Noakhali Tipperah, Chittagong Hill Tracts. |

In the following pages we will consider the population of Bengal Proper only, as answering approximately to the country whose castes we are treating.

The Hindu population of Bengal Proper is here given from Table I of Census of India, 1891, Vol. IV :—

| | | Male | Female. | Total. |
|---|---|---|---|---|
| Burdwan Division .. | ... | 3,167,422 | 3,232,547 | 6,399 969 |
| Presidency ,, ... | ... | 2,207,620 | 2,043 837 | 4 251,457 |
| Rajshahi ,, ... | ... | 1,528 984 | 1,395,727 | 2,024 711 |
| Dacca ,, ... | ... | 1,696,410 | 1,662,771 | 3,359,181 |
| Chittagong ,, ... | ... | 570,545 | 562,792 | 1,133,337 |
| Total | ... | 9,170,981 | 8 897,674 | 18 068,655 |

Speaking roundly, there are eighteen millions of Hindus in Bengal Proper.

We give here the number of people of some of the principal castes in Bengal Proper. The figures are taken from Vol. V of Census of India, 1891 :—

| | | Male. | Female. | Total. |
|---|---|---|---|---|
| A'guri ... | . . | 41,362 | 43,567 | 84,929 |
| Bágdi ... | ... | 381,917 | 388,104 | 770,021 |
| Baidya ... | ... | 36,762 | 37,725 | 74,587 |
| Baniya* ... | . | 161,513 | 154,458 | 318,971 |
| Búrui ... | ... | 68,297 | 65,628 | 133,925 |
| Bráhmans ... | ... | 560,477 | 542,708 | 1,103,185 |
| Dhopá .. | ... | 117,872 | 112,742 | 230,614 |
| Dom (including Kaora) | ... | 138 146 | 134,684 | 272,830 |
| Goálá ... | ... | 325,791 | 291,099 | 616 890 |
| Jugi ... | .. | 173,354 | 17 .422 | 343,776 |
| Kaibartta ... | ... | 1,044,643 | 1,046,693 | 2,091,336 |
| Kámár (including Lohár) | .. | 135 714 | 134,754 | 270,468 |
| Kánsári ... | .. | 8,835 | 8,511 | 17,346 |

* Including (i) Baisya, (ii) Gandhabanik. (iii) Khatri, (iv) Subarnabanik In this Chapter we will adopt the spelling of names of castes as in the Census of India, 1891.

| | | | |
|---|---|---|---|
| Káyastha (including Karan) ... | 525,175 | 535,221 | 1,060,396 |
| Kumhar ... ... | 142,280 | 138 803 | 281,083 |
| Mana (including Halwai and Kuri) | 66.317 | 60,884 | 127,201 |
| Málákar ... ... | 26,760 | 24,910 | 51,670 |
| Namasudra or Chandál ... | 868,523 | 867,582 | 1,736,105 |
| Nápit (including Hájjam) ... | 223,873 | 220,342 | 444,215 |
| Sadgop ... | 262.797 | 266,957 | 529 754 |
| Sánkhári ... ... | 6,149 | 6,086 | 12.235 |
| Sonár ... ... | 29,660 | 27,799 | 57.459 |
| Sunri (including Kalwar) ... | 200.296 | 200,145 | 400.441 |
| Sutradhar ... ... | 88.304 | 85,823 | 174.127 |
| Tambuli .. ... | 26,156 | 27.078 | 53,234 |
| Tánti ... .. | 157,077 | 149,322 | 306,399 |
| Teli (including Kalu and Tili) ... | 259,424 | 255 720 | 515,144 |

In this list the Kaivarttas stand first, then the Chandáls, and then the Bráhmans, and this fact is caught hold of by Mr. R. C. Dutt in holding up to ridicule Manu's account of the origin of the mixed castes, and by appealing to the common sense of his readers to brush it aside to the region of myths and nursery tales.* He cannot believe that the Ayogava women yielded themselves to the embraces of Nishádas in producing the Kaivartta race, or Bráhman women to the embraces of Súdras in producing the Chandál race. He, therefore, supposes that the Kaivarttas and the Chandáls are the aboriginal races who inhabited Bengal before the A'ryas came to the land and submitted themselves to the civilisation, the language and the religion of the conquering Hindus. We have already proved the futility of Mr. Dutt's argument against the fact of a small parent stock expanding into a large race, or a distinct nation; and it remains now to point out that his supposition that the Kaivarttas and the Chandáls are the aboriginal races or tribes of Bengal, is itself a nursery-tale and a fabrication of his own imaginative brain. The plains of Bengal, intersected, as they are, by innumerable rivers, creeks, channels and water-courses, afford more excellent fields for cultivation and fishing than the dry and high lands of Upper India, and this clearly accounts for the presence there of two millions of Kaivarttas and one-and-a-half million of Chandáls. The Kaivarttas and the Chandáls are spoken of in the Census of India, 1891, Vol. III, page 266, as Hinduized Dravidian and Hinduized Mongoloid Lohitic, respectively, and not as aboriginal races as by Mr. Dutt. We have no inclination to enter into the merits or demerits of the classification of the author of the census, but we cite it simply to prove that Mr. Dutt's supposition is not accepted by him. It is possible that when the plains of Bengal emerged out of the sea, in time out of all tradition and memory, and in a pre-historic period, the Kaivarttas and the Chandáls, and a few others were the only classes of people who were attracted

* Dutt's 'Ancient India," Vol. III, pp. 154-157.

to that part of the country as best fitted to give them a livelihood, before the high caste people, such as the Bráhmans and others came to it, and, having inhabited the country from a very remote period of antiquity, their number far exceeds the Bráhmans and people of other castes who came to dwell there at a later period. They were, in fact, the pioneers who colonized the country and brought it to the habitable condition before the high caste people came and settled there.

The Musalmans of Bengal Proper form a solid body of nineteen millions of people. For obvious reasons we have not taken into consideration the social status of the followers of Islamism in Bengal. The Musalmans and the Hindus, though living side by side in many places, are religiously and socially distinct peoples from each other, and can never unite to form a new nation, though each has copied some customs and usages, both social and religious, of the other. Our mention of the name of Musalmans in this place has special reference to the following extract from Volume III of Census of India, 1891, page 146, which we commend to the consideration of every educated Hindu in Bengal Proper :—

> "It thus appears that throughout all three great divisions of Bengal Proper, and in nearly every district, Hinduism has largely declined and Muhammadanism advanced during the past twenty years. * * * * Since 1881 the predominance of Islam has been still more marked all over Bengal Proper, with the exceptions of the Dinajpur, Bogra, Bankura and Hugli districts, in each of which immigration from the Hindu regions before mentioned still preserve the relative pre-eminence of that religion. It is statistically proved that since 1872 out of every 10,000 persons, Islam has gained 100 persons in Northern Bengal, 262 in Eastern Bengal, and 110 in Western Bengal,—on an average 157 in the whole of the Bengal Proper The losses to Hinduism are in direct proportion, where they have not been confused by the different grouping of the religions of the hill tribes at the three censuses. The Musalman increase is real and large If it were to continue, the faith of Muhammad would be universal in Bengal Proper in six-and-a-half centuries, whilst Eastern Bengal would reach the same condition in about four hundred years."

A most interesting fact regarding the longevity of the Hindus is disclosed by the Census of India, 1891. The following extract is worthy of being read by all :—

> "In longevity the Hindus of Bengal Proper have very markedly the advantage over Musalmans, the women of the latter religion in Western bengal being strikingly short-lived. * * ** * The longer life of Hindu men in Bengal is probably due to their conditions of life being more favourable. They form the mass of the more well-to-do, the professional, commercial and artizan classes, whilst the Musalmans are almost universally agriculturists, out-of door labourers exposed in the fields doing the operations of tillage to the heavy rains of the delta and the malaria they engender."—[*Census of India, 1891, Vol. III, page 170*]

Another interesting fact which the Census Operations have disclosed is contained in the following extract :—

> "The marriage statistics recorded in the foregoing statements afford no evidence of the existence of the practice known as Kulinism, by which a Bráhman of high rank marries many wives, usually of a lower section than his own, the alliance being sought by the parents of the girls for the sake of the social distinction it confers on the family, and for which they are ready to pay the polygamous husband handsomely. * * * * On the whole, therefore, it may be said that Kulinism exists only to a very limited extent. In

fact, as is generally known, public opinion is very hostile to the practice, and seems to have either suppressed it or nearly succeeded in doing so."—[*Census of India, 1891, Vol. III, p. 208.*]

We know that English education has wrought a change in the direction indicated above, but we fear the statement made in the foregoing extract is not so accurate as we would wish it to be. Kulinism still prevails in various parts of Bengal, though not to such a degree as when the late Pandit Isvara Chandra Vidyasagara moved the Government of India to legalize widow marriages. A Kulin Bráhman usually lives with one or at most two wives in his own house, but his other wives are generally left to their fate in their fathers' house, and it is not improbable that, in supplying figures to the enumerators, the Kulin Bráhmans, illiterate as they generally are, and being under an impression that a poll tax might be imposed on them, have been tempted to suppress facts, and to hand back an incorrect return. On the whole, it may be said, that the pernicious system of Kulinism has commenced to wane in proportion as English education is spreading over the country.

As regards education, the following extract from the Bengal Government Resolution of the 12th July 1893 is worthy of perusal :—

"The statistics of literacy are of the most satisfactory description. 'The number of men in British territory, who can read and write, has increased from 1,955,177 to 2,048,794, or exactly 50 per cent. while for women the progress has been still larger, *viz.*, from 6 ),567 to 109,684, or by 80·9 per cent.' For males the increase appears in every district without exception, and the same is the case with females, except in those districts where it is almost certain that there was an excess in the returns of 1881."

As regards widow-marriage, the Resolution has the following remarks :—

"46. The truth is that the practice of widow-remarriage is more prevalent in Bengal than is generally supposed, and—a most important consideration—the practice has apparently spread considerably since 1881. The statement in the margin, prepared from the Table given at page 100, Volume I of the Census Report for 1881, and Table VIII-B of Volume IV of the Census of 1891, compares the proportion of widows in every 10,000 Hindu females in four age-groups of the child bearing period at each Census. The great decrease in the proportion of widows is very striking, and, as might be expected, the decrease is most marked at the most marriageable ages, though it exists at all child-bearing ages. These results must be due to one or more of three causes—*first*. There must have been a decrease in the comparative number of infant-marriages of girls, as the widows in the first period are so much fewer than in 1881; *secondly*, there may have been a general increase in the practice of widow-marriage; and, *lastly*, there may have been a great addition to Hinduism from those tribes and castes who do not practice infant-marriage, and allow the marriage of widows To what extent each of these influences has been at work, it is impossible to say: probably each has contributed its share; but bearing in mind the extreme conservatism of Hindu society, the efforts of some sections of the community to raise their social position by encouraging infant-marriage, and forbidding the remarriage of the widowed, and the almost imperceptible progress which any

| Ages. | Number of Widows in 10,000 Hindu females of each age | | |
|---|---|---|---|
| | | 1891. | Difference. |
| 15—19 . | 791 | 654 | -137 |
| 20—24 . | 1,136 | 1,032 | —104 |
| 25—29 . | 1,661 | 1,583 | —78 |
| 30—39 . | 2,828 | 2,796 | —32 |
| Total four periods . | 2,040 | 1,718 | —322 |

social reform of this magnitude can make in so short a period as ten years, the Lieutenant-Governor is disposed to think that the third of the suggested influences may have been the most potent."

We are inclined to add that the decrease is, to a great extent, due to the increase in the number of females who resort to disreputable means of livelihood The number of females who obtain livelihood by disreputable means is put down as 69,829 (Census of India, 1891, Vol. III, p. 285), and the details of the figure are given in Volume IV, pages 522-524, to be—

| | 0-4 Years. | 5-14 Years. | 15 years and over. | Total. |
|---|---|---|---|---|
| In towns .. | 1,132 | 3,733 | 36,212 | 41,077 |
| In country ... | 1,782 | 3 578 | 23,392 | 28,752 |
| | 2,914 | 7,311 | 59,604 | 69 829 |

excluding the number up to 14 years, we may say roundly that the total number of females, of 15 years of age and over, who obtain livelihood by disreputable means is 60,000, but we have reason to believe that the actual number far exceeds the figure put down in the report. The figures of 1881 are not given in the report, but we know, as a matter of fact, that in Calcutta and other large places, the number has greatly increased during the last two decades, and it is not too much to suppose that the true explanation of the decrease in the number of widows in 1891, as compared with the number recorded in 1881, may be found in the direction pointed out by us.

We will conclude this chapter by another quotation from the Resolution of 12th July 1893 regarding occupations :—

"61 * * * The statistics of male occupations are disorganised to a less extent, and the report contains several elaborate Tables setting forth the leading points ascertained by the enumerators. Taking the figures for what they are worth, the following Table gives the totals of the seven great classes by six in the Lower Provinces :—

| Occupations. | British Territory. | | | | Feudatory States. | |
|---|---|---|---|---|---|---|
| | Urban. | | Rural. | | | |
| | Males | Females. | Males. | Females. | Males. | Females. |
| Class A. Government .. .. | 73 657 | 37,677 | 319,247 | 281,276 | 21,646 | 17,785 |
| Class B. Pasture and agriculture .. | 328,016 | 255 295 | 23,468,157 | 22,546,455 | 1,122,119 | 1 094,644 |
| Class C. Personal services ... | 238 752 | 184,366 | 1,070,878 | 1,007,815 | 35,095 | 31,707 |
| Class D Preparation and supply of material substances ... | 565,695 | 392,234 | 4,000,632 | 4,220,405 | 161,336 | 162,490 |
| Class E. Commerce, transport, and storage ... | 225,031 | 139,754 | 898,557 | 764,818 | 19,979 | 14,797 |
| Class F. Professions ... | 127,110 | 96,954 | 584,644 | 584,992 | 21,311 | 17,751 |
| Class G. Indefinite and independent | 346 963 | 331,432 | 4,379,960 | 4,839,245 | 220,104 | 218,113 |
| Total | 1.9 5,224 | 1 538,652* | 33,658,075 | 34,245 036 | 1 601,592 | 1,556,347 † |

* We get 1,437,652 by actual totalling.
† We get 1,557,297 by actual totalling.

"62. The pursuits of the inhabitants of Bengal are shown to be as largely agricultural as before. Among the rural population as many as 65 61 per cent are employed in agriculture, and even in towns, the percentage is as high as 16 77. In villages the indefinite class comes next with 12·01 per cent., followed by those engaged in preparing food and drink, who amount to 4·54 per cent. of the total In the towns naturally the disproportion is not so marked; pressing closely on the 16 77 per cent. employed in agriculture follow 15·56 per cent. in the indefinite class, 12·54 per cent. employed in personal, household and sanitary service, and 10·19 per cent. who supply food and drink; manufactures, commerce, transport, and the liberal professions, all return a proportion of more than 5 per cent." * * *

*Miscellaneous.*—MR. SHERRING on 'Caste of India.'

We have shown before that in primitive ages there was no such system as caste-distinction among the A'ryas, and that all the members of the Aryan society enjoyed equal privileges. Gradually, in process of time, as the society expanded and extended over the country, the system of caste evolved itself naturally. Those members who followed a particular profession, were named after that profession. The religious welfare of a people being considered in every clime and every age the highest aim of man, those who were entrusted with that sacred duty received the appellation of Bráhmanas, and were naturally believed, in course of time, when the priesthood became crystalized into a caste-distinction, to have emanated from the mouth of the Creator of the Universe. This, in ordinary language, means nothing more than that the Bráhmanas were considered as occupying the first position in the Aryan society, just as the mouth is considered to be the most prominent part of the human frame which stands higher in relation to other parts of the body. In the same way, the duty of protecting the country and the people from foreign aggressions being considered the next in order of importance, those who were entrusted with it were naturally looked upon as standing next in order to the Bráhmanas. The secular welfare of a people being considered subordinate to their religious welfare, the Kshatriyas came to be regarded as having sprung from the arms of the Creator, which occupy the next lower position in the human frame. But these two classes of duty were not sufficient for the welfare and comforts of the whole society. There must be other classes of duties which were very necessary for its secular welfare, *viz.*, tillage of land, rearing of cattle, trade and commerce, &c. These duties were entrusted to a third class of people who were called Vaisyas, and who were naturally looked upon as having sprung from the loins of the Creator—the part of the body which is symbolical of toil and labour. And yet there was another class of duty, *viz.*, service to the first three classes, which the society stood in need of. Those who were entrusted with this class of duty were called Súdras, and were looked down upon as having sprung from the feet of the Creator, which means nothing more than that they occupied the lowest rank in society,

just as the feet form the lowest part of the human body. It does not mean that the feet of the Creator are the worst part of his body (if he has any), for when people worship him they worship his feet and not his mouth, or arms, or loins. For some time the Aryan society was divided into four main divisions, but it was not possible for it to remain in *status quo*. Illegal marriages and connections were natural and frequent, and these gave birth to numerous mixed castes, of which an account has been given in the preceding pages. To the people of each mixed caste, a well-defined duty was assigned; and so long as the Aryan society was governed by the laws of Manu, it conformed itself as closely as possible to those laws.

It is said that, in the primitive stage of the Aryan society, cohabition with any female was not considered a crime, and anyone could snatch away a girl from the embraces of her husband, until Shvétaketu, the son of Uddalaka Muni, seeing his mother dragged away by another Muni, passed the law that a man should never lie with another man's wife, nor a woman with the husband of another woman (see Mahábhárata, A'diparva, story of Shvétaketu). But there was no prohibition for a woman, on failure of issue, to cohabit with another man, say a brother or a cousin of her husband's, for the continuance of the line. The great Kaurava dynasty would have become extinct, had not the two widowed daughters-in-law of Satyavati, the daughter of a fisherman, afterwards the queen of king Sántanu, been permitted to lie one night each with Vyása Déva (son of Satyavati by Parásara Muni when she was a virgin). Dhritarástra and Pándu were the offsprings of this strange and romantic connection. Instances similar to the above are not wanting during the period of the Mahábhárata, and the fact that the princess Draupadi was married to the five brother Pándavás, each of whom enjoyed her by turn, conclusively proves that the rigid law of marriage, that each woman should have one husband only, was sometimes relaxed.

Mr. R. C. Dutt has the following remarks:—

> "The ancient custom of raising issue on a brother's widow seems to have fallen into disuse. Manu in his anxiety to adhere to ancient rule, and also to proclaim a purer custom, seems to flatly contradict himself. In IX, 59 and 60 he says that on failure of issue by her husband, a wife or widow who has been authorized, may obtain the desired offspring by a brother-in law, or by some other Sapinda of the husband. But shortly after he emphatically declares that a widow must never be appointed to raise issue in this way: that in the sacred texts the appointment of widows is nowhere mentioned; that the practice is reprehended by the learned as fit for cattle (IX, 64 to 68).
>
> * * * * * *
>
> "It will be seen from what has been stated above that the Institutes of Manu are somewhat composite in their character, the author tries to adhere to ancient law, often quotes the current sayings and verses

> of his time—many of which have been found in the Mahábhárata; and, at the same time, he is anxious to proclaim a pure law for the Aryans. Actuated by such different influences, Manu is sometimes uncertain in the rules he lays down, but the general scope and object of his law cannot be mistaken by the candid reader." * * * *
>
> *Dutt's "Ancient India," Vol. III, pp. 166 and 167.*

Manu is quite certain in the rules he lays down. In his anxiety to publish his volumes to the world in a hurry, Mr. Dutt appears to have studied the Institutes of Manu not very attentively. "Nor is it Homer nods, but we that dream." If he reads verse 59 by the light of verse 64, the so-called contradiction disappears. In the former verse Manu says that the issue may be raised by the husband's brother, or by some other Sapinda; but in verse 64, he distinctly says that the twice-born men (*i. e.*, Bráhmanas, Kshatriyas and Vaisyas) must never permit issue to be raised on a widow in this way. The inference is that in verse 59 he lays down a law for men of the servile class, or Súdras, which, in verse 64, he says, is not applicable to the three higher classes, and we are glad to find that Sir William Jones, in translating verse 59, has introduced a conditional clause—"*if he be of the servile class*"—in italic, thus indicating that he saw no contradiction in Manu.

But whatever the matrimonial law was in the primitive ages, the raising of the issue on a female by a man other than her husband, has long been a dead enactment, and Manu expressly forbids it in the case of the twice-born classes. The custom probably still lingers among certain low classes of people. But Manu expressly permits a man, under certain conditions, to marry a woman belonging to the caste or castes below him. This enactment shows clearly that the caste-system in his time had not crystallized itself into the form in which we find it at the present day. In our times a Bráhmana can never marry, under any circumstances, a woman of the Kshatriya, or Vaisya, or Súdra class; a Kshatriya, a woman of the Vaisya or Súdra class; or a Vaisya, a woman of the Súdra class. But such marriages were common in Manu's time. It is true that he forbids a man to take as his first wife a woman of the class below him, but then his enactment that he may take as his *second* or *third* wife a woman of the class or classes below him, has in course of time become a dead letter. Instead of the law being refined to the extent of the first marriage of a man being performed with a female of any class below him, the four castes are for ever barred from any social intercourse with one another. The Bráhmana believes that he is superior by birth to a Kshatriya, a Vaisya, or a Súdra, and that for his comfort people of other castes were born. This pretension to superiority, which people generally of the three lower classes still allow, is sometimes well founded, but in ninety-nine per cent. of cases

is a vain pretension which cannot be admitted as right. A Bráhmana chanting the holy hymns of the Vedas (a very rare spectacle in modern times), propounding a transcendental system of philosophy, teaching the world the immortality of the human soul (ন হন্যতে হন্যমানে শরীরে), and laying down rules for the guidance of the whole society, measuring the "merry dances" of the sun and moon and stars and planets, or depicting Nature in "numbers harmonious," and raising in the mind of the reader love, grief, joy, heroism, peace, &c., is truly an object of veneration, and may be regarded as born from the mouth of the Creator, as a preternatural being, a veritable god in human shape. But what shall we think of a Bráhmana who cannot read and write, cannot distinguish right from wrong, or whose claims to superiority over people of other castes consist in nothing more than mere birth in a Bráhmana's family, or who fattens on the toils of other people without being able to give them spiritual blessings in return? Shall we not echo what Manu has said?

যথা কাষ্ঠময়ো হস্তী যথা চর্ম্মময়ো মৃগঃ।
যশ্চ বিপ্রোঽনধীয়ানস্ত্রয়স্তে নাম বিভ্রতি॥
যথা ষণ্ঢোঽফলঃ স্ত্রীষু যথা গৌর্গবিচাফলা।
যথা চাজ্ঞেঽফলন্দানং তথা বিপ্রোঽনৃচোঽফলঃ॥

*Manu, Chapter II, verses* 157 *and* 158.

"As an elephant made of wood, as an antelope made of leather, such is an unlearned Bráhmana: these three have nothing but names.

As an eunuch is unproductive with women, as a cow with a cow is unprolific, as liberality to a fool is fruitless, so is a Bráhmana useless, if he read not the holy texts."

*Sir William Jones.*

A Bráhmana, then, who is unlearned in the Vedas, is not necessarily superior to people of other castes. A Kshatriya who is learned in the Vedas, is, therefore, superior to a Bráhmana who is unlearned, and may be enrolled in the class of Bráhmanas. Visvámitra, though born a Kshatriya, was invested with the distinctive Bráhmanical thread, and was regarded as a true Bráhmana. The four distinctive classes were formed in ancient times for the economy and welfare of the Aryan society. Promotion from a lower to a higher class on account of merits and learning, and degradation from a higher to a lower one on account of failure of duties, were probably not uncommon in ancient times. The influence which this sound law exercised on the Aryan society was inestimable. It created in the mind of people of the highest class a motive for learning the Vedas and doing meritorious work, and produced in it a deterring effect as respects bad work. It also stimulated people of lower classes to do good and meritorious

work. But the rule which was prevalent in the Aryan society, at a very remote period of antiquity, was set aside, and no one after the Vedic period was promoted from a lower to a higher class. But even then a Bráhmana shrank not from partaking of dressed rice and other prepared food from the hand of a person of either of the two classes below him. Durvásà Rishi, a Bráhmana of undoubted purity, with his disciples, partook of dressed rice and other articles of food from the hand of Draupadì, queen of the five Pándavas, who were Kshatriyas (Mahabhárata, Vanaparva). But in our times this can never take place. The caste-system, which was originally based on social duties, combined with merit, has in course of time degenerated into a distinction in food, drink and marriage. Each caste shuts its door with adamantine chain against another caste, so that ingress and egress are not possible. A person born in a Bráhmana family is to his death a Bráhmana, provided he does not openly embrace either Mahomedanism or Christianity, or marry a woman of any caste below him. So long as he remains within the pale of his society, no matter whether he acts according to the shástras or not, he is a Bráhmana, and an object of veneration to people of other castes. The same is the case with a Kshatriya, a Vaisya, or a person of any other caste.

We are not breakers of the system of caste, which is the natural product of the Indian soil; but we honestly believe that it is susceptible of reformation and re-organization. Many of the customs and usages which sprang up on the decline of Buddhism, and the subjugation of the country by the followers of Islamism, and which have enervated the natural vigour, and still continue to shed their pernicious influence on the social life of the nation, may be rooted out, for these like so many weeds have choked the tree of caste and have caused it to produce poisonous fruits. The evils or curses which the caste-system of the present day has produced on society cannot, therefore, be too strongly condemned: they are patent everywhere, and are consuming the last vital force of the nation. But, before we proceed to delineate those evils or curses, it will not be out of place to take a bird's eye-view of the caste-system from a Christian point of view. The Rev. Mr. M. A. Sherring has written three big volumes of the Caste of India, *viz.*:—

(1) Hindu Tribes and Castes as represented in Benares, Vol. I, 1872.

(2) Hindu Tribes and Castes, together with an account of the Mahomedan Tribes of the North-Western Frontier, and of the Aboriginal Tribes of the Central Provinces, Vol. II, 1879.

(3) Hindu Tribes and Castes; together with three dissertations on the Natural History of the Hindu Caste, the Unity of the Hindu Race, and the prospects of Indian Caste, Vol. III, 1881.

It is not our purpose to deal with the myriads of castes or tribes of various parts of India, Bengal excepted, of which details are given by M. Sherring. We will consider some of the leading points of his view regarding the caste-system of India, for they apply equally to the castes which inhabit the plains of Bengal.

In the Introduction prefacing the first volume of his work, the Rev. gentleman says:—

> "The only castes, therefore, that have, for the most part, preserved their purity of blood, are the Bráhmans, Kshatriyas, and perhaps some of the Vaisyas. I say for the most part, because in former days, an intruder might, under certain circumstances, enter one or other of the privileged caste. Many Bráhmans, Kshatriyas, or Vaisyas, may have become outcaste, or may have married women of inferior castes, so that their offspring, of necessity, were cut off from their own tribes. In this manner, members of these castes, or children, partly sprung from them, may have been merged in the lower castes. But none of the lower castes could easily enter the upper, which are consequently, as just remarked, comparatively pure-blooded castes. All the rest are of impure or mixed blood. I use the word 'comparatively' as simply distinguishing the three higher from all the remaining castes, for stringent as the laws of caste have been, yet even these three have not been able to preserve themselves from an occasional taint. The least affected have been the Bráhmans; and the most, the Vaisyas." * * * *
>
> *Pages xxi and xxii.*

We confess we fail to understand the remark that, in former days, an intruder might, under certain circumstances, enter one or other of the privileged castes. We are not aware of any instance of the sort. A Kshatriya might, like Visvámitra, have been enrolled as a Bráhmana, and, probably, a Vaisya, might have become a Kshatriya. But such instances are few and far between. There is a class of Bráhmanas in Bengal called Vyásokta Bráhmanas, *i.e.*, their ancestor was originally a Súdra, but made a Bráhmana by the word of the great Vyása; but, up to date, they have remained a separate class. No true-born Bráhmana has ever mixed with them socially; and should any good Bráhmana, from covetousness or other impure motive, find it to his own interest to make *ádan* and *pradán* with them, he will be instantly cut off from his own kinsmen. Mr. Sherring probably means that the offspring of a Bráhmana by a Kshatriya female is neither a Bráhmana nor a Kshatriya, but occupying, as he does, a medial position, is an intruder, and may have been enrolled as a Bráhmana, but such sons are generally enrolled as Kshatriyas, and so on with the offspring of a Bráhmana by a Vaisya female or a Súdra female; of a Kshatriya by a Vaisya female or Súdra female; and of a Vaisya by a Súdra female. And as these sons have, in rare instances, been enrolled as belonging to the caste of the father, and in a majority of cases to the caste to which the mother belonged, the highest caste-people, *i.e*, the Bráhmanas have, for the most part, preserved their

purity of blood, while the Kshatriyas have lost that purity in a greater degree, and the Vaisyas in a still greater degree If this be the meaning of the Rev. gentleman, we are bound to record our dissent. Verses 64 and 65 of Chapter X of the Mánava Dharma Shástra, which we have quoted in original in our article elsewhere, clearly lay down that, if a female of the caste sprung from a Bráhmana and a Súdra female bear children to one of the highest caste, the inferior tribe attains the highest caste within the seventh generation.* We believe that this process of purification of blood was at one time common in the Aryan society, and we fail to see how the three higher castes could become impure or mix-blooded. On the other hand, a Bráhmana sinks to the level of a Súdra (Chapter X, verse 65), *i.e.*, if the son of a Bráhmana and of a Súdra female, and his descendants marry Súdra wives, the seventh descendant will be a pure Súdra Medhatithi, Govindaráma and Kulluka Bhatta), and the verse further lays down that the law is the same with the offspring of a Kshatriya or of a Vaisya It will thus be seen, on the one hand, that a Súdra and *à fortiori* a Vaisya, or a Kshatriya, attains the rank of a Bráhmana, and a Bráhmana, or a Kshatriya, or a Vaisya, sinks to the level of a Súdra. This law of purification or degeneration of blood was sanctioned by Manu, and, therefore, perfectly legal. It cannot be called a mixture of blood in the sense in which Mr Sherring would have us believe. The conclusion arrived at by Mr. Sherring, that "the least affected have been the Bráhmanas, and the most the Vaisyas," is therefore not correct. Granting, for the sake of argument, that the law of Manu means nothing more than mixture of blood, we fail to see how the Bráhmanas could have been the least affected, and the Vaisyas the most. The offspring of a Bráhmana and a Súdra female might become a pure Bráhmana within the seventh generation under the conditions laid down by Manu and the offspring of a Kshatriya by a Súdra female similarly became a pure Kshatriya within the seventh generation, and so on with the Vaisyas † The three higher castes, therefore, have become equally tainted, and the statement that the Bráhmanas were tainted in a small degree, the Kshatriyas in a greater degree, and the Vaisyas, for the most part, cannot, therefore, be admitted. But we cannot admit that the law of the purification of

* All the commentators of Manu, including Kulluka Bhatta, agree in maintaining that, if the daughter of a Bráhmana and of a Súdra female, and her descendants all marry Brahmanas, the offspring of the sixth female descendant of the original couple will be a Bráhmana.

† According to the commentators of Manu the offspring of a Bráhmana and a Kshatriya female obtains the highest or lowest rank in the third generation; and that of a Bráhmana and a Vaisya female in the fifth. See Bühler's translation of Manu, edited by F. Max Müller, Oxford, 1886.

blood laid down by Manu is really a law for the mixture of blood. It is a law which is based on reason, and which is perfectly consistent with other laws of the same legislator. In the Aryan society, every social act was performed according to a certain well-defined law, and nothing according to the whims or caprices of any particular individual, or even a number of individuals. There can be no question of persons of high class marrying females of the class or classes below, but the sons born of such marriages are not immediately enrolled as belonging to the high or low class, but have a well-defined position or status, and may either form a separate class altogether, or are merged in the high or low class when the conditions laid down in the law are strictly fulfilled.

In coming to a conclusion immediately following the extract made by us, the Rev. gentlemen appears to have made a bungle of the whole matter. We quote below the words used by him:—

> "We thus arrive at the conclusion that existing Hindu castes are of two kinds: first, those of comparatively pure blood, Brahmans, Kshatriyas, and, perhaps, some of the Vaisyas; secondly, those of impure or mixed blood embracing all the castes not included in the first division. The first have maintained their individuality from ancient times to the present. The rest have not done so, but have intermarried with the higher castes, with one another, and with conquered aboriginal races."
> —*Page xxiii.*

What does the Rev. gentleman mean by saying that the castes included in the second division, "have intermarried with the higher castes, with one another, and with conquered aboriginal races?" He cites the instance of the great paucity of girls in the Rajput tribes, and the consequent matrimonial alliances which they have been obliged for many generations to make with girls of low castes, especially the Raj Bhars, who having been purchased or carried off from their families, have been transformed into Rajputanis or wives of Rajputs. If this really takes place among the Rajputs (and we have no ground to question the truth of the statement), then it follows that the law of Manu regarding taking of wives from caste or castes below still lingers in the sandy deserts of Rajputana, though in a modified form. But it cannot be said that the Rajputs give their own daughters in marriage to Raj Bhars. There has never been reciprocal exchange of daughters between the Rajputs and the Raj Bhars, and hence the Rajputs marrying girls of the Raj Bhar tribe are as pure as the Bráhmanas of the time of Manu who married Súdra wives.

Again, we do not know that the castes of the second division which are not precisely detailed by Mr. Sherring) have intermarried with one another, or with conquered aboriginal races. Intermarriage between people of different castes, or with the

conquered aboriginal races, has never taken place in the Aryan society without its having been at once condemned, and without the people intermarrying being cut off from the community of food and drink with their own kinsmen. Mr. Sherring seems to indicate that the different classes of the Vaisyas have, for the most part, become tainted by intermarrying with one another, or with conquered aboriginal races, but this does not appear to be a fact. A Vaisya of one class marrying a Vaisya female of another class is a very rare spectacle in our times. Formerly, he might take a Súdra wife, or, possibly, a female of an aboriginal tribe, but he never gave his own daughters in return. On this point the law of Manu is very precise.

> "——— He who was begotten by an Aryan or a non-Aryan female may become (like to) an Aryan by his virtues: he whom an Aryan (mother) bore to a non-Aryan father (is and remains) unlike to an Aryan." *Chap. x, verse 67, Bühler's translation.*

As regards the Súdras we do not know to what extent they have preserved their purity of blood in the upper provinces of India. There are unquestionably pure Súdras in those provinces, but the pretensions which certain classes of people of dubious origin have advanced to purity of blood have put the pure class or classes into the back ground, so that it is not possible to distinguish between pure and mixed classes. As regards mixed classes of those provinces, intermarriage, if it ever takes place between them, is rather a blessing than a curse; but in Bengal at least intermarriage between people of mixed classes is an impossibility.

In the Aryan society of olden times, the Vaisyas were one class of people who pursued several avocations assigned by law. Manu does not mention any divisions or sub-divisions among them. A Vaisya who cultivated the soil, might exchange girls with a Vaisya who tended cattle, or who carried on the profession of a merchant, for both of them belonged to the third class of pure castes of the Aryan society. Hence, they could not become tainted in any way on account of marriage in their own circle. They might also take Súdra wives, but never gave their own daughters to Súdras. There was, therefore, no chance of the Vaisyas and Súdras having been mixed with one another. In fact, the three higher castes remained pure after the formation of their classes.* And when the several sub-divisions of each class were formed in course of time, they gradually became separate from one another and moved in their own circle as regards marriage. In Bengal this isolation has, from the time of Bullal Sen, been rigidly adhered to.

*(To be continued.)*

* The writer's conclusion seems physiologically incompatible with the facts admitted by him.—*Ed. C. R.*

# ART. VIII.—THE PRESENT SITUATION IN THE BRAMHO SOMAJ.

## (INDEPENDENT SECTION.)

THE opinion is now widely and openly entertained, that the Bramho Somaj is on a steady course of decline. The Bramhos may not admit this, but the fact of such an impression is undoubted. The impartial part of the public, especially the European public, do not want to do injustice, but have always been generous, giving the Bramho Somaj credit for both what it has done, and what it has meant to do, but it has no right to expect more than its due. It must explain its present situation, if it can, in order that the old confidence may be regained.

Thirty years ago the Bramho Somaj was the only modern monotheistic movement in Hindu society, and, though at no time was its following very large, the sympathy it excited was wide. It was always influential and noteworthy, because of its progressive principles and its expected future. It was, in those days, the only organisation that recognised female education as an essential question, and aimed at social reform in all its branches. Its founder was chiefly instrumental in putting an end to the custom of widow-burning; he made a great protest against popular idolatry, openly helped the Christian missionaries, and did many things besides to introduce a new epoch. Three eminent men, in regular and rapid succession, Raja Ram Mohan Roy, Devendra Nath Tagore, Keshub Chander Sen, represented its spirit and progress, and those who followed them, though not very numerous, were mostly men of light and leading. Just now there are other monotheistic bodies all over the country, though, indeed, not a few of them are based on an imitation of the Bramho Somaj. Social reform is recognised as a part of the programme of the educated Hindu community everywhere. Female education flourishes in many households that are outside Bramho influences.* The orthodox Hindu centres show a good deal of

* The proportion that the Bramho Somaj bears to other sections of the native community in respect of female education is thus indicated in the Report of the Bethune College for the year 1894, the only College in Calcutta for the education of girls :—"On the 31st January of the present year there were 19 students in the College department, of whom 10 belonged to the Bramho persuasion, 7 were Bengalee Christians, 1 Hindu, and 1 Eurasian. In the School department there were 132 girls, of whom 59 were daughters of Bramho parents, 16 Bengalee Christians, and 57 Hindus. On the same date there were 44 boarders as against 33 last year. Of these 29 belonged to the Bramho Somaj, 11 were Bengalee Christians, and 4 Hindus." The value of these figures becomes significant, when it is remembered that in point of numbers the Bramho Somaj is incredibly small in comparison with each of the four communities represented.

tendency towards organised progress. Men of eminence are seen in every section of Indian society, and in all directions there is a recrudescence of Hinduism. Consequently the old monopoly of public esteem which was its possession, has very much got out of the hands of the Bramho Somaj. Men have begun to look for a new order of evolution in the old orthodox Hindu communion. Bramhos have no reason to be sorry for this, because it shows that the negative work of their Society—the work of criticism, of protest, of the removal of popular prejudices and errors—has been, in a large measure, accomplished. They may also feel some satisfaction that a few of their constructive principles, such as monotheistic aspirations and social reforms have been adopted. They may take heart to observe the same thing in religious organisations in other countries. The teaching which led to the impeachment of Bishop Colenso thirty years ago, is now accepted without question by the great majority of the bench of English Bishops. When Dean Stanely advised the Rev. Stopford Brooke to stay on in the Church of England, pointing to the fact that the Church had broadened, and was getting broader every day, Mr. Brooke asked if it was broad enough to make James Martineau the Archbishop of Canterbury. If it was not, then "it was not broad enough for him." Perhaps Stopford Brooke has lived long enough in his isolation to find out this, that, though the Anglican Church was not broad enough at the time when he left it, yet the essentials of the doctrine of the Unitarians, whom he has nominally joined, have been so far incorporated in "the forward movement" among English theologians, that, if he had staid on, as Farrar, Freemantle, and others have done, he would not have felt the difference. But such absorption of the specialities of new movements by the older ones is a well known fact in history. It undoubtedly strengthens all ancient systems, as it strengthened Hinduism, six or seven centuries ago, at the expense of Buddhism; but it undeniably takes the breath out of reform movements, unless these know how to add to their ordinary functions, and develop a higher life out of the original professions with which they started. Hence the Bramho Somaj, though its principles and operations have evidently permeated the religious thought of the country, has been somewhat debilitated by the process. Whether its energies can be recouped; what its present outlook may be, are questions on which a few words are necessary.

The death of Keshub Chander Sen marks a most important epoch in the history of the Bramho Somaj movement. In the course of his life the organisation, which had grown up under his genius, unfortunately split up, ostensibly into three sections, but practically into many. Some say that his death, untimely as

it was, was hastened by the spectacle of these actual or imminent differences. Whether these differences be for good or for evil, they prove how difficult it is for any indigenous movement in this country to maintain its unity out of regard to central principles, when personal differences make the course of co-operation irksome and disagreeable. But perhaps a deeper view of the matter is possible. It is possible to think that each of these divisions has helped to consolidate its own underlying principle, and thus indirectly added to the general importance and secret life of the whole movement. It must, however, be pointed out that this added vitality can be realised, only when some kind of mutual understanding, common sympathy, and approaching coalition makes the improvement of one the improvement of all. Whatever interpretation the Bramho Somaj may like to put on its many minute and premature divisions, it is bound to show, if its life is to be prolonged, that, dividing for conscience sake, it can also unite for conscience sake, and that conscientious division is no weakness, except from a party point of view, but ultimate strength to the common cause.

Does English patriotism, the solidarity of the English constitution, or the prestige of the English House of Commons, gain, or lose, by the growing disruption of political parties? Tory and Whig, Liberal Unionist and Radical may fight with each other, but is there an increase or decrease of the British national power on that account? Let a great danger threaten the common country, or a great emergency appeal to the common sense of duty, then all the factions will melt into a homogeneous patriotism, and all Englishmen will act as one man. The different orders and organisations into which the great Roman Church is divided, add to its power, and do not take away from it. The Catholic Church would have long ago ceased to influence mankind if Franciscans, Dominicans, and Jesuits, and other orders like them, with different disciplines but a common enthusiasm, had not laboured to spread the common cause. The Church, in recognising them, and in co-operating with them, has made itself invincible. The High Church Ritualists, the Low Church Evangelicals, the Broad Church reformers, though often militant against each other, give that diversity to the Anglican Establisment without which it would soon perish as a national church. The Vedantists, the Vaishnavas, the Saktas, and the latter-day Hindu sects of the Punjab, or Guzrat, or Benares, may have many internal dissensions, but they stamp that many-sidedness on the Hindu religion without which it could not adapt itself to the various mental constitutions of the vast population of India. The Sunnis and Shias, and Sufis and

Wahabis, are intolerant of each other, but they all contribute to the power and permanence of the great Mahomedan faith. The unity which Church organisations in modern times are to have must be the comprehensive unity, which takes in, and does not exclude, the varieties of culture and constitution. But men at the present day, in their rage for making proselytes, are grieved if they fail to herd together all denominations in their own particular fold, as if all mankind were not sworn into a sort of universal caucus. If each church were allowed to retain its organisation, and widen on its own lines, the result would be a brotherhood where all unity and variety would find a reconciliation.

Now let us see what the different sections of the Bramho Somaj stand for, and whether it is possible to trace among them anything like a chain of connection and continuity, leading up to common ends. The first of them, in order of time, is the Adi (or elder) Bramho Somaj, deriving its lineage directly from the Society originally founded by Raja Ram Mohan Roy in 1830, at Chitpore Road, Calcutta. His object was a national monotheistic culture on the lines of archaic Hinduism. Now the Brahmo Somaj has always aspired to be a national church, and to lay down at least the framework of the future religion of India. Undeniably it has great aptitudes for such a work. But a national church it is not yet; on the contrary, the chief disadvantage with which it has to struggle is its denationalised character. Its origin is a mixed origin of Hindu and Christian influences, of Eastern and European culture; but, owing to the local prevalence of the latter, during the larger period of its career, it has gone on accentuating and adding to its European aspect, till the national side of the movement is not only obscured, but nearly lost sight of. True, it has adopted the provincial vernaculars for its vehicle of thought, and, what is more, has immensely improved those vernaculars. It has retained the dress and manners of the country where it has flourished, and even taken part in the social and national prejudices surrounding it. But every national religion keeps up the continuity of the national mind, embodied in the literature and in the faith of the past. Did Buddhism ignore Sanskrit and the six systems of Hindu philosophy? It reformed them, superseded them, but, all the same, was founded upon them. Did Christianity ignore Hebrew and the Mosaic law? The Gospels were written in Greek, and the Mosaic dispensation was substituted by a higher one, but Christianity was laid upon Hebrew foundations. What would Islam be without Arabic literature? But the Brahmo Somaj, after the first thirty years of its existence, betook almost exclusively to English culture and English ideals, till at the present time its spirit, its aspirations, its models are nearly all Western.

From this alien tendency the Adi Brahma Somaj has done more to save itself than any other branch of the Society. How successfully it has done this, is known to all who have watched its peculiar work and personal history. It has been one of the chief agencies—certainly the first in the field—to construct a high order of modern Bengali literature. Its great service in this matter cannot be ignored, and it would be more graceful, as well as grateful, if the nation would fully acknowledge its debt to the Adi Brahmo Somaj. Devendra Nath Tagore, the aged preceptor who has always led it, supplied the motive and inspiration of this work. Nearly four score years old, honoured and loved by all, this venerable man embodies in his person the whole history and highest culture of the Brahmo Somaj. He has seen everything and known everyone. From Raja Ram Mohan Roy, whom he succeeded in the leadership of the Society, to the veriest tyro who has just learnt his religious alphabet, everyone is familiar to him. They call him the Maharshi (great Aryan saint) because his speciality is a life-long study and complete mastery of the Upanishads, which contain the cream of the old Hindu religion. He is as consummate an advocate of Sanskrit in Brahmo Somaj services and ritual as any Catholic prelate could be of the Latin liturgy, his whole religious constitution is crystallised in scriptural Sanskrit, and his spirit has descended to his sons and successors. His friend, Raj Narain Bose, the present president, is a white-haired philosopher, who has done his best to cast the principles of the Adi Somaj into the mould of primitive Hinduism. Dwijendra Nath Tagore, the patriach's eldest son, is a metaphysician and writer of great power. Ravindra Nath Tagore, another son, is a poet, essayist, and musician, a sort of popular idol among Young Bengal. All these men are national in their tastes and tendencies. If the present agitation, which goes under the name of Hindu Revival, were true to what it professes, it would at once acknowledge its obligations to Devendra Nath Tagore and his colleagues, men who were the first to undertake the translation of the Vedas, the expositions of the Upanishads, and the interpretation of the Sastras generally ; men who, rather than break with the traditional Hindu spirit in their Church, broke its connection with Keshub Chunder Sen, who was for a long time the mainspring of their public activities. Why thoughtful men among advanced orthodox Hindus do not seek closer alliance with the Adi Brahmo Somaj would be a marvel if it could not be accounted for by the rigid monotheism of that body. Popular Hinduism is grossly polytheistic. But is not higher Hinduism monotheistic ? Perhaps we misjudge. Perhaps the Adi Brahmo Somaj is more popular than we think ; certainly it could be if it tried. Be that as it may, of one thing there is no doubt, the conser-

vatism which differentiates the Adi from other sections of the Brahmo Somaj, has never in the least affected its loyalty to the fundamental principle of One God Without a Second. When it re-addresses itself to the reclamation of spiritual theism from the wilderness of Sanskrit literature, and takes pains to occupy once more a leading part in the formation of a new and higher Hinduism, after which all modern India is so eagerly bent, it will do justice to itself and the great cause of national religious reconstruction. But, whether it is able to accomplish this destiny or not, the Adi Brahmo Somaj, in being a necessary part of the modern theistic movement in India, gives it a variety, an originality, and a national flavour which it is to be hoped its leaders will be able to continue after their venerable chief is laid to his rest.

In the second place, the Brahmo Somaj of India, as Keshub Chunder Sen called his Society after he seceded from the elder party, had for its object not the mere recasting of the old national faith, but the formation of a new religion, a 'New Dispensation," a universal Church, an apostolic brotherhood on the basis of simple theism. This dispensation is to include what is true and spiritual in all dispensations, and build up a national church to which both Hinduism and Christianity are to contribute their essential elements, a new Christianity and a new Hinduism making the future faith of India. With what fervent devotedness and ceaseless labour he worked to carry out this ideal, employing all the resources of his great genius, and how loyally he was supported by his followers, is too fresh in the public mind to need recapitulation. But a life-time, even such a life-time as his, is not sufficient for the accomplishment of such great objects. Perhaps he would have lived longer to carry them out if he had not spent himself incessantly for their immediate success. He struggled, above all things, that the Brahmo Somaj might outgrow the stage of mere rationalism and modern freethought, and rise to the status of a fully formed faith. With this view he laid down its liturgy, prescribed its ritual, gave its laws, formulated its creed, fixed its authorities, and established its organisation.* Nay, he aimed and worked

* Never had the Brahmo Somaj pretended that its religion was suited to the masses of the people. It might do for educated or semi-educated men, it might suit the comparatively refined intelligence of the higher castes, its history in Calcutta and in the other great cities showed that clearly enough, but Brahmoism lacked in the popular requirements of imaginativeness, of an appeal to the sense of beauty, to emotional tenderness, to the suggestion of the spiritual from the material for which the common religion of the people is so fatally attractive to them. Other nations might do without ceremonies and symbols, though, indeed, it would be difficult to point out where those nations are, but surely the warm-natured Hindus have never been, nor shall be able to dispense with the external embodiments of religion. Keshub Chunder Sen and his church have tried to introduce these popular elements into the religion of Brahmo Somaj: Street singing and processions, flags, flowers, and sacred vestments, fasts, and dances, and chants, candles and incense, fairs and festivals of all kinds have been prescribed. There were strong and continued protests, but the experiment was steadily tried as long as Keshub lived.

at so many things, that, in their complexity, many forgot the singleness and simplicity of his object; and, while some accepted his spirit without accepting all his forms, others accepted his forms without understanding his spirit, while a large number neither accepted the spirit nor the forms, but indulged in thoughtless criticism and blind hostility. The ideals of the New Dispensation, as stated by its late minister, cannot be outgrown, far less ignored, by any section of the Brahmo Somaj, or any intelligent community. They may be misunderstood for a while, but they will have to be accepted in the end.

Among Keshub's followers there are men of sterling worth. Gaurgovind Rai is a man of the antique Hindu devotee type, a ripe Sanskrit scholar, austere, unflinching and tireless in work. Girish Chunder Sen is an Arabic and Persian student of great merit; he has translated the Koran into Bengali, and the works of many Sufi saints. A man of apostolic simplicity and independence, he is widely esteemed. Trailokya Nath Sanyal is another able man. His forte lies in musical and literary authorship. He has been a sort of Moody and Sankey in the Brahmo Somaj, rendering into song the spirit of its prayers and preachings. Banga Chunder Rai, of Dacca, by his piety and public spirit, is a power in East Bengal. Kanty Chander Mittra is a man of different type. But his practical usefulness, in doing needed personal service to Brahmo missionaries and their families, has often been more beneficent than the brilliant abilities of his more prominent colleagues. These men, and others like them, are not eminent in their social position, but they continue, to the best of their light, some of the peculiar character of Keshub Chunder Sen's labours. Yet it must not be thought that the supporters of the New Dispensation are only obscure men. The Maharaja and Maharani of Cuch Behar are among the first in the land, and their advocacy of Keshub's principles is enthusiastic. The late Krishnabehary Sen, Keshub's brother, whose untimely death all Calcutta mourns with singular unanimity, was a prominent leader of his brother's movement, and his intellectual and moral worth added significance to it. All over Bengal and other Indian provinces, there are a multitude of zealous, virtuous, and capable men, who warmly support the Brahmo Somaj of India. If these faithful souls are better able than they have been to unite in a common work, less eager to find each other's faults, more ready to exchange mutual recognition, less dogmatic about their own theories, and more tolerant about those of others, they could exalt the whole Brahmo Somaj, as well as more efficiently carry out the objects of their own church.

In the third place, though the Sadharan Brahmo Somaj is youngest in years as an organisation, yet undeniably, in Calcutta, it is not only stronger than other Brahmo Somajes, but

by its activity preserves the existence of the Brahmo Somaj from slipping out of the memory of a busy public. As strictly monotheistic in creed and earnest in religious endeavour as the elder societies, it was founded in 1878 with the object of conducting the Brahmo Somaj, as corporate bodies everywhere are conducted, according to constitutional principles determined by the public. It was a protest against individual predominance, and an experiment in democratic church government. Everything was to be decided in it by franchise, and the majority of votes. The opportunity for its formal organisation was the excitement arising out of the marriage of Keshub Chunder Sen's daughter with the Maharaja of Cuch Behar, but the principle of resisting the authority of single individuals, however gifted, and the tendencies of an apprehended priesthood, had been working in the minds of its members for a long time. Very unhappily the personal authority here implicated was that of Keshub Chunder Sen himself, and the movement at its inception could not help taking a character of protest against him and his work. A novel experiment in church government, like this, was bound, in the beginning, to provoke comment and opposition. But the Sadharan Somaj, in an unbroken record of seventeen years, shows how much it has accomplished in Calcutta. It has largely answered its own expectation, it has surprised its critics, and disarmed not a little of their hostility. Its membership is numerous, its committees are earnest, its congregations are crowded, its schools and colleges are popular, its social activities and reforms are manifold, its resources are growing. Democratic as it is, some of its leaders are men of acknowledged intellectual and social prominence. Chief amongst these is the Hon. Anand Mohan Bose. He is the first and only Cambridge Wrangler among Indians, and, to his many accomplishments, adds a sweetness of personal character and genuineness of religious conviction which impresses every one who approaches him. Dr. P. K. Roy is a scholar and leader of long standing, a man whose judgment and learning have been of great service to the Brahmo Somaj on many an emergency. Babu Rajani Nath Roy, the secretary of the Sadharan Brahmo Somaj, is a government official of high rank ; he had the distinction of a brilliant University career, and possesses social qualities and personal excellence widely esteemed. Babu Durgamohan Dass, the well-known pleader of the High Court, has, by his unstinted generosity, greatly helped not only the Brahmo Somaj, but a great many people and many causes outside it. But to no one does the Sadharan Brahmo Samaj owe more of its success than to Pandit Sivanath Sastri, its minister, a Sanskrit and English scholar, a man who does not prominently come forward before the public, but whose enthusiasm and self-devotedness are un-

surpassed by any missionary in any section of the Brahmo Somaj. There are other men—especially young men—in this branch of the movement of whom honourable mention could be made, but these suffice. The constitutional course of the Sadharan Somaj is no doubt one of the causes of its continued vitality, and the progress it has made. But constitutionalism is not the whole, nor the chief thing in church life. Insight, spiritual experience, apostolic impulse, advancing culture, widening sympathy with the profoundest thought, and continued progress of the world are necessary. There is no reason why the Sadharan Brahmo Somaj should not open itself out in these directions. When it has done so, and also when it has been able to absorb what is really excellent, both in the principles and personalities of the elder branches of the Society, its part in the future Brahmo Somaj will be surely as high as that of any other.

Such are some of the salient features and chief workers in the Brahmo Somaj. It goes without saying that they have their limitations and positive faults. Some of these are incidental, some chronic; if unchecked they would be fatal, and they account for a good deal of what is downward and retrograde just now. As a friend of the movement, it is the present writer's object to point out the possibilities of the situation, embarrassing as that is. Brahmos are becoming more and more exclusive; by their continued dissensions they are losing touch with the great Hindu society which their former leaders maintained; they care little to learn anything from the great Christian community around them; with the vast religious organisations outside their community they seem to have little in common. Thus crammed within their narrow surroundings, they suffer all the isolation which, in a youthful and inexperienced community, means death. There must be more cohesion amongst the important elements; there must be less self-sufficiency, more eagerness for union. The Brahmo Somaj is not a richly endowed Society, but there is sufficient wealth in its membership to sustain and promote its usefulness. The Brahmo Somaj is not numerically large, but it has more men of genuine worth, earnest conviction, and undoubted self-sacrifice than any other modern movement in India. What is necessary to develope its unused resources, and unite its scattered energies? A sense of common interest, a spirit of historic continuity, an unsectarian and selfless participation in common ends, and a mutual recognition of their own work and workers. Above all things, they need that spirit of faith and dependence upon His guidance, who reconciles animosities and differences in a spirit of growing unity with His spirit and purposes.

The Brahmo Somaj is now so well-known all over the world, and its career so keenly watched by the advanced men of every communion, that it is responsible for what it does, not to the little sects in which it is split up, but to a very large and mixed tribunal outside their limit. But its leaders are either ignorant or forgetful of the fact. They show a growing tendency to contract into intolerant parties. The theoretical professions are large, the practical exclusiveness is heartless. Hindus, and Christians, and Mohammedans, and all others are blandly included in an eclectic patronage; but when it comes to a matter of the paltriest difference of opinion among themelves, it ends in war to the knife. Out of every bit of petty partisanship, eternal verities and universal destinies are evolved like solar convulsions out of a cucumber. For the sake of the smallest clauses and bye-laws, for the wrong-headed persistence of ill-disguised partisanship and youthful loquacity, discussions are prolonged to midnight hours, while whole perspectives of progress and perfection are thrown on one side because they command no majority. "One with God," Emerson used to say, "is the right majority." Was not truth ever in the minority? Great revolutions of religious thought and national life, projects of world-wide union among denominations and faiths are in progress in every direction. The Brahmo Somaj, if it is to have any useful function, must outgrow its own history, must widen both in pious sympathy and spiritual character, must so regulate its activities, its devotions, its disciplines of thought, and elasticity of organisations, as to be able to secure the interest as well as the co-operation of all onward thinkers and leaders of the religious world.

The large interest taken in the Brahmo Somaj is much owing to the simplicity of its theism. Men are so tired of the endless dogmatism of religious systems, that they eagerly sympathise with any organisation that bases itself on the fewest first principles of a spontaneous faith. But principles, however elementary, are more or less abstract, they always need to be embodied in worship, in good works, in character. When so embodied, they make *religion*, otherwise they remain mere philosophy. The work before the Brahmo Somaj is therefore no longer the preaching of its monotheism; it is a great deal more. It is the initiation of a new worship, representative of the deepest and wisest impulses of the human spirit, equally removed from the liturgical formalism of the churches, and the empty talkativeness of shouting revivalists. The new work of the Brahmo Somaj is the initiation of such practical beneficence as will set the whole system of modern charity and reform, in their widest sense, on a hitherto untried basis, the basis of altruism and absolute self-sacrifice. The func-

tion to which the simple theism of the Brahmo Somaj ought now to address itself is laying a new ideal of holy living, not artificial, not abstract, but revived, developed; and practically lived, out of the excellence inculcated in Christianity and other great religions. It is, perhaps, true that some men in the Brahmo Somaj have proposed this great new work to themselves—undoubtedly Keshub Chander Sen did—; but it is necessary that as a body they should all do it. Then one may foresee that the arrested progress of the movement will be once more set free, and the apparent decline, which at times overtakes all great causes, will be succeeded by a fresher and more abundant life than it ever possessed before.

# ART. IX.—MAHMUD OF GHAZNI AND THE LEGEND OF SOMNATH.

THE reign of Mahmud of Ghazni is of great importance in the History of India, as it marks the beginning of the critical period of the Mahomedan rule, fraught with momentous consequences to the land and its peoples. Ancient history, which, in the West, is, by common consent, taken to have terminated with the fall of Rome in 475 A. D., lasted much longer in India, and may be said to have closed here with the advent of the Mahomedans under Mahmud. For all previous history up to this point presents a homogeneity which clearly distinguishes it from the subsequent period. The Mahomedan conquest and rule of India changed completely and disastrously the condition and character of the various peoples affected by it. The accounts which we have of the Hindu character from writers in pre-Mahomedan times, are inapplicable to it in later days, owing to the curse of the foreign rule. The truthfulness, honesty, bravery, and many other good qualities which Greek observers, like Megasthenes and Arrian, noted and admired in them, gradually gave way under the political and religious tyranny to which they were subjected for nearly eight centuries by their Mahomedan rulers, and are only now beginning to revive under another, and a far better rule. "Their bravery is always spoken of as characteristic, their superiority in war to other Asiatics is repeatedly asserted and appears in more ways than one. They are said to be sober, moderate, peaceable; good soldiers; good farmers; remarkable for simplicity and integrity; so reasonable as never to have recourse to a law-suit; and so honest as neither to require locks to their doors, nor writings to bind their agreements. Above all, it is said (by Arrian) that no Indian was ever known to tell an untruth." Of course, there is some exaggeration in all this, as may be seen from the remark made on this account by one whose bias, if he had any, was certainly on the side of the natives, and whom they hold in the highest esteem. "We know," says Mountstuart Elphinstone, "from the ancient writings of the Hindus themselves, that the alleged proofs of their confidence in each other are erroneous. The account of their veracity may safely be regarded as equally incorrect; but the statement is still of great importance, since it shows what were the qualities of the Indians that made most impression on the Macedonians, and proves that their character must since have undergone a total change. Strangers are now struck with the litigiousness and falsehood of the natives; and when they

are incorrect in their accounts, it is always by exaggerating those defects." *

This change in character was but natural in a subject people. Falsehood and treachery are the weapons to which helpless subjects of despotism readily turn when they have no open and brave means of hostility left. The enlightened and liberal views which the Hindus held about the education and freedom of women, had necessarily to be changed when they were confronted with the lawlessness of their licentious new rulers. It would be very intersting to enquire into the moral effects of Mahomedan rule upon the Indians, but this is not the place for it. The subject is here touched only to show the critical nature of the epoch heralded in India by Mahmud of Ghazni. It may be said that he found a garden and converted it into a desert. The work of wanton destruction gratuitously begun by him—for the redeeming feature of the idea of possession and rule is absent in his case, as after each invasion he returned to his capital—was continued by successive rulers and dynasties who, however, showed more method in their fury.

Personally Mahmud is an attractive subject to the historian. Gallant, brave, prudent, enterprising, zealous, and, above all, scrupulously just, he is the character to fascinate. When we add to this the magnificence of his court, the grandeur of his city, his love for architecture, and, especially, his munificent patronage of literature, we cannot wonder that he has been made a hero by his people. This last trait is specially attractive. He collected round him some of the best men of letters of his time—Ansuri, Rudini, Firdausi, the poets, Al Utbi the historian, Albiruni the philosopher—, and his reign shines with the reflected lustre of their literary renown. The great epic of Firdausi alone would keep his bays green for ever, if all other laurels were to be stripped by time from his brows. Among oriental potentates, he shares with Caliph Harun Al Rashid and Akbar alone, the rare honour of ranking with Pericles and Augustus, Louis XIV and Queen Anne, for the literary splendour of his reign. As Mohl puts it, he had established at his court a veritable Round Table and become the King Arthur of the East.

But it is for his religious zeal, amounting to fanaticism, that he is chiefly remembered by his co-religionists. It was zeal for his faith that induced him to invade, year after year, the distant provinces of India, and to carry away innumerable captives, to be converted and sold into slavery. No doubt, his ruling passion of avarice, which was found in his case literally "strong in death," as is attested by the story of his weeping on his

* Elphinstone *History of India*, Ed. 1874, p 266.

deathbed at the sight of the enormous wealth and grandeur that he had ordered to be paraded before him for the last time, and which he could not carry with him out of this life, this avarice had much to do with his activity, especially as he was immensely enriched by his campaigns. But still it can hardly be doubted that his chief motive was religious zeal. At least his contemporaries thought so. He got from the Commander of the Faithful the title of Yamin-ood-Dowla, and was called by his people the Ghazi,—titles highly coveted by all true followers of Islam.

His memory is cherished by them on this account to the present day, and many are the legends woven around it by pious fraud and believed by pious credulity. It is one of these—what I have called the legend of Somnath—that is selected for examination in this paper. A mixture of a lie doth ever add pleasure, said Bacon, and the Persian historians who manufactured and embellished this legend, were great adepts in this art of mixing truth with falsehood. Nothing that added to the glorification of a Ghazi of their faith could be wrong or false in their eyes. The end truly justified the means with them. Nothing that could discredit and damn the infidels could be considered reprehensible to be invented. Hence, their pages contain many fictions invented to praise the Faithful, greatly at the expense of the infidels, who, in their eyes, had no claim to justice or truth at their hands.

This religious bias and unscrupulousness is a great drawback to the authority of these historians, who, without it, are also untrustworthy enough. One who had studied them thoroughly, and who has, moreover, done much more than anyone else to spread a knowledge of them, says that it is almost a misnomer to style their works histories, and that they "may be said to be deficient in some of the most essential requisites of history." * He notices in them "the intense desire for parade and ostentation, which inclines authors to quote works they have never seen, and to lay claim to an erudition which the limited extent of their knowledge does not justify." And he quotes an instance of how, in one list of works, he found that "from beginning to end it was a complete fabrication, the names of the works being taken from the prefaces of standard histories in which it is usual to quote the authorities, the very identical sequence of names, and even the errors of the originals being implicitly followed."†

Great care should thus be employed by a modern enquirer in using these Persian historians of India, and it would be

* Elliot preface to *Historians of India*, 1849, Part I. p. xv.
† *Ibid.*

dangerous to follow implicitly the authority of anyone of them, however, renowned for accuracy he may be. Collating them with one another, and, if possible, with independent authorities, we can arrive at something like the real facts, though it must always be a matter of doubt whether we can be sure of the truth of events related by these historians alone.

In his sixteenth invasion Mahmud came to the temple of Somnath and captured it after a stubborn resistance on the part of its defenders. Somnath is in Kattiawar, and, on its site, is the present town of Prabhas Puttun which, flared up into notice so suddenly and disastrously in 1893. A striking description of its site is given by Tod:—"Nothing can surpass the beauty of the site chosen for the temple, which stands on a projecting rock, whose base is washed by the ocean. Here, resting on the skirt of the mighty waters, the vision lost in their boundless expanse, the votary would be lulled into a blissful state of repose by the monotonous roar of the waves. Before him is the bay extending to Billawal (Verawal), its golden sands kept in perpetual agitation by the surf, in bold and graceful curvature; it is unrivalled in India, and although I have since seen many noble bays, from that of Penzane to Salurrum, perhaps the finest in the world, with all its accessories of background, and in all the glory of a closing day, none ever struck my imagination more forcibly than that of Puttun. The port and headland of Billawal, with its dark walls raised as a defence against the pirates of Europe, form a noble terminating point of view, and from which the land trends northwards to Dwarca. The peaks of Girnar, twenty *coss* distant, would raise the sublimest feeling, or if he choose more tranquil scenes, the country around presents objects of interest, the plains being well wooded and diversified both by nature and art."*

But Mahmud must have cared little for the beautiful situation and the natural scenery of the place. He was intent on taking the place by force and breaking the idol. It is with this breaking of the idol that the legend is connected. The earliest account of this in English is that of Col. Dow, whose "History of Hindustan, translated from the Persian," published in 1767-72, professes to be a translation of the famous Persian historian Ferishta, but contains much put in by himself. This is Dow's account:—† "In the centre of the hall stood Somnath, an idol of stone, five yards in height, two of which were sunk in the ground. The King was enraged when he saw this idol, and, raising his mace, struck off the nose from his face. He then ordered that two pieces of the image should be

* *Travels in Western India*, p. 344.
† Vol. I, pp. 65-66, Ed. 1812.

broken off to be sent to Ghazni, there to be thrown at the threshold of the public mosque and in the court of his palace. Two more fragments he reserved to be sent to Mecca and Medina. When Mahmud was thus employed in breaking up Somnath, a crowd of Brahmans petitioned his attendants and offered some crores in gold if the King should be pleased to proceed no further. The Omrahs endeavoured to persuade Mahmud to accept of the money; for they said that breaking up the idol could not remove idolatry from the walls of Somnath, that therefore it could serve no purpose to destroy the image, but that such a sum of money given in charity, among believers, would be a very meritorious action. The King acknowledged that what they said was in some measure true; but, should he consent to that bargain, he might justly be called a seller of idols; and that he looked upon a breaker of them as a more honorable title. He therefore ordered them to proceed. The next blow having broken up the belly of Somnath, which had been made hollow, they discovered that it was full of diamonds, rubies and pearls of a much greater value than the amount of what the Brahmans had offered, so that a zeal for religion was not the sole cause of their application to Mahmud." This account is in the main an accurate version of Ferishta, though the later one of Briggs is more close. With Dow's version may be compared the more correct translation of Ferishta, given by Briggs :* " In the centre of the hall was Somnath, a stone idol, five yards in height, two of which were sunk in the ground. The King, approaching the image, raised his mace and struck off its nose. He ordered two pieces of the idol to be broken off and sent to Ghizny, that one might be thrown at the threshold of the public mosque, and the other at the court door of his own palace. These identical fragments are to this day (now 600 years ago) to be seen at Ghizny. Two more fragments were reserved to be sent to Mecca and Medina. It is a well authenticated fact, that when Mahmud was thus employed in destroying the idol, a crowd of Brahmins petitioned his attendants and offered a quantity of gold if the King would desist from further mutilation. His officers endeavoured to persuade him to accept of the money, for they said that breaking one idol would not do away with idolatry altogether, that, therefore, it could serve no purpose to destroy the image entirely; but that such a sum of money given in charity among true believers would be a meritorious act. The King acknowledged there might be reason in what they said, but replied, that if he should consent to such a measure, his name would be handed down to posterity as 'Mahmud the idol-seller' whereas he was desirous of being known as 'Mahmud the destroyer:' he therefore directed the

* Briggs' "Ferishta," Vol, I, pp, 72-73, Ed. 1829.

troops to proceed in their work. The next blow broke open the belly of Somnath, which was hollow, and discovered a quantity of diamonds, rubies and pearls, of much greater value than the amount which the Brahmins had offered."

This version of Dow has been the chief ource of misleading later writers. Gibbon, coming a few years after Dow in 1786, based his short account on him, and compressed it in the following round sentence :—* "He repeated his blows, and a treasure of pearls and rubies, concealed in the belly of the statue explained in some degree the devout prodigality of the Brahmins." Then came Maurice, the learned author of Indian Antiquities, who, in his "Modern History of Hindoostan," published in 1802, gave the same account, with the embellishment about the nose of the idol. "In the fury of Mahomedan zeal, he smote off the nose of the idol with a mace which he carried, and ordered the image to be disfigured and broken to pieces. . . . , the persons appointed, having mutilated the superior parts, broke in pieces the body of the idol, which had been made hollow, and contained an infinite variety of diamonds, rubies and pearls of a water so pure, and of a magnitude so uncommon, that the beholders were filled with surprise and admiration." Next came James Mill, who, in his first volume of the "History of India," published in 1817, repeats the same.† "At the next blow the belly of the idol burst open : and forth issued a vast treasure of diamonds, rubies and pearls, rewarding the holy perseverance of Mahmud, and explaining the devout liberality of the Brahmans. ‡

After Mill came Price, who, in the second volume of his "Mahomedan History," published in 1821, bases his account on the Khulasat-ul-Akbar, as well as Ferishta. "The circumstance of its being smitten on the nose by the mace of Mahmud, and of the immense treasure concealed in its belly, are already known. We shall here just mention that he rejected a prodigious ransom to spare it, alleging that, of two appellations, rather than the idol broker, he chose to be called *Mahmud the idol breaker :* and, to reward his zeal, the precious contents discovered in the hollow of the idol surpassed an hundred fold the sum which had been offered the Brahmins for its redemption." § Even the judicious Elphinstone is misled into giving the same account in his excellent history published in 1841, though, in a line in the note, he expresses some doubt and says, that Feristah's "account might be true of some idol in the temple." ‖ Since the time of

* "Decline & Fall," Vol VI Chap. LVII p. 361.
† "History of Hindoostan" Vol. I, Part I. p 296
‡ Vol. I, p. 177, Ed. 1858.
§ Retrospect of Mahomedan History, Vol. II. p 289, 1821.
‖ P. 336, Ed. 1874.

Elphinstone, Prof. Wilson showed in 1843, how the mistake was made, by referring to certain Persian historians. But later writers have not heeded this, and continue to repeat the old story, which has the sanction of the authorities we have quoted. Two books published very recently, Mr. Rees' short account of the Mahomedans, in Mr. Adam's Series, and Syed Mahmud Latif's more pretentious and bulky History of the Panjab, give the same old account.

Only Sir W. Hunter has given the correct version of the sack of Somnath and the breaking of the idol in the historical part of his *Gazetteer*. But, owing to its very narrow limits, he has merely condensed the result of the enquiry in a few lines. It is here proposed to trace the origin and growth of the legend by means of all the authorities available, some of which were rendered accessible only recently, and consequently not used by Wilson, and to dissipate the delusion, if possible, once for all.

Ferishta, as we have seen, who wrote before 1611 A. D., in the reign of Jehangir, is the source for all European writers who mention the event. But Feristha is not alone in narrating it. The writers of the *Tarikh-i-Alfi*, a great history composed by the order of Akbar, of the thousand years after the Hegira that expired in his reign, say that, "It is a well authenticated fact, that when Mahmud was about to destroy the idol, a crowd of Brahmans represented to his nobles, that if he would desist from the mutilation, they would pay several crores of gold coins into his treasury. This was agreed to by many of the nobles, who pointed out to the Sultan that he could not obtain so much treasure by breaking the image, and that the proffered money would be very serviceable. Mahmud replied, "I know this, but I desire that on the day of resurrection, I should be summoned with the words, 'Where is that Mahmud who broke the greatest of the heathen idols?' rather than by these: 'Where is that Mahmud who sold the greatest of the idols to the infidels for gold?' When Mahmud demolished the image, he found in it so many superb jewels and rubies that they amounted to, and even exceeded an hundred times the value of the ransom which had been offered to him by the Brahmans.

Ferishta cites as his general authority the celebrated *Rauzat-us-Safa* of Mirkhond, which was written towards the close of the 15th century. But Mirkhond's account does not mention the remarkable incidents we have seen alluded to by all the writers quoted above. It merely says:—"The temples were demolished and razed to the ground. The stone of Shomnath

was broken into fragments, some of which were sent to Ghazni and placed at the door of the mosque, and were there many years." Khodamir, the son, or according to some, the nephew of Mirkhond, in his *Habib-us-Tiyar*, written 1521-28, gives a similar account:—

> "Somnath was an idol cut out of stone, whose height was five yards, of which three yards were visible, and two yards were concealed in the ground. Yaminu-d-Daula, having broken that idol with his own hand, ordered that they should pack up pieces of the stone, take them to Ghazni, and throw them on the threshold of the Jami Masjid. The sum which the treasury of the Sultan Mahmud obtained from the idol temple of Somnath, was more than twenty thousand thousand *dinars*, inasmuch as these pillars were all adorned with precious jewels."*

The oldest account of this expedition is that given by Ibn Asir in his *Kamilu-t-Tawarikh*, written about 1230 A. D., and this also does not mention the incidents of the bribe and the belly. It is very specific in its details, and has been largely drawn upon by later writers. It says:—"The temple of Somnath was built upon 56 pillars of teakwood covered with lead. The idol itself was in a chamber, its height was five cubits, and its girth three cubits. This was what appeared to the eye, but two cubits were hidden in the basement. It had no appearance of having been sculptured. Yaminu-d-Doula seized it, part of it he burnt, and part of it he carried away with him to Ghazni, where he made it a step at the entrance of the Jami Musjid. The shrine of the idol was dark, but it was lighted by most exquisitely jewelled chandeliers. Near the idol was a chain of gold to which bells were attached. The weight of it was 200 mans. When a certain portion of the night had passed, this chain was shaken to ring the bells, and so rouse a fresh party of Brahmans to carry on the worship. The treasury was near, and in it there were many idols of gold and silver. Over it there were veils hanging, set with jewels, everyone of which was of immense value. The worth of what was found in the temple exceeded two millions of dinars, all of which was taken."† A contemporary of Ibn Asir, the famous Ibn Khalikan, adds another detail, and says that the idol had 30 rings in its ears.‡ Abul Feda, in his *Annals*, written about the same time, at the commencement of the 13th century, confirms the fact that the idol was burnt.

Thus, as we get nearer to the times, we get more accurate and less embellished accounts. We may note, whilst dealing with writers of the 13th century, that the famous Shaikh Sadi, who who lived 200 years after Mahmud, gives an amusing tale of his own adventures at Somnath in his *Bustan*. But from the

* *Apud.* Elliot and Dowson, Vol. IV, p. 183.
† *Apud.* Elliot and Dowson, Vol. II. p. 183.
‡ *Biographical Dictionary*, Vol. III, p 333.

details he mentions, it is quite evident that he never saw the inside of the temple, nor the idol, for, most strangely, he calls it a temple of the Guebres or Parsis, who, as is well known, have no images whatever in their places of worship.

When we come to the contemporary writers, we get the straightforward account of the famous Albiruni, which sets the whole matter at rest. From his account it is certain that the idol was not a statue having any form or belly, but was a stone *linga*, or phallic image of Mahadeva. The great contemporary chronicler of Mahmud, Al Utbi, does not narrate the events of this campaign of Somnath, as he stops a few years before this event, otherwise we might have had a most valuable narrative which would have set at rest all doubts.

The following is Alburuni's account in his *Tarikh-i-Hind*, taken from Dr. Sachai's recent scholarly and faithful translation. "The lunar stations they declare to be the daughters of Prajâpati. to whom the moon is married He was especially attached to Rohinî, and preferred her to the others. Now her sisters, urged by jealousy, complained of him to their father, Prajâpati. The latter strove to keep the peace among them, and admonished him, but without any success. Then he cursed the moon (Lunus), in consequence of which his face became leprous. Now the moon repented of his doing, and came penitent to Prajâpati, who spoke to him: 'My word is one, and cannot be cancelled; however, I shall cover thy shame for the half of each month.' Thereupon the moon spoke to Prajâpati: "But how shall the trace of the sin of the past be wiped off from me?" Prajâpati answered: "By erecting the shape of the linga of Mahâdeva as an object of thy worship." This he did. The linga he raised was the stone of Somnâth, for soma means the moon and nâtha means master, so that the whole word means master of the moon. The image was destroyed by the prince Mahmud—may God be merciful to him! A. H. 416. He ordered the upper part to be broken, and the remainder to be transported to his residence. Ghaznî, with all its coverings and trappings of gold, jewels, and embroidered garments. Part of it has been thrown into the hippodrome of the town together with the Cakrasvâmin, an idol of bronze, that had been brought from Tâneshar. Another part of the idol from Somnâth lies before the door of the mosque of Ghaznî, on which people rub their feet to clean them from dirt and wet.

* * * * *

"Varâhamihira says about the construction of the linga:—

"After having chosen a faultless stone for it, take it as long as the image is intended to be. Divide it into three parts. The lowest part of it is quadrangular, as if it were a cube or quadrangular column. The middle part is octagonal, its surface being divided by four pilasters. The upper third is round, rounded off. . . . . .

In erecting the figure, place the quadrangular third within the earth, and for the octagonal third, make a cover which is called pinda, quadrangular from without, but so as to fit also on the quadrangular third in the earth. The octagonal form of the inner side is fit on to the middle third, which projects out of the earth The round third alone remains without cover."

Further he says :—

"If you make the round part too small or too thin, it will hurt the country and bring about evil among the inhabitants of the regions who have constructed it. If it does not go deep enough down into the earth, or if it projects too little out of the earth, this causes people to fall ill. When it is in the course of construction, and is struck by a peg, the ruler and his family will perish. If on the transport it is hit and the blow leaves a trace on it, the artist will perish, and destruction and diseases will spread in that country."

"In the south-west of the Sindh country this idol is frequently met with in the houses destined for the worship of the Hindus, but Somnâth was the most famous of these places. Every day they brought there a jug of Ganges water and a basket of flowers from Kashmîr. They believed that the linga of Somnâth would cure persons of every inveterate illness and heal every desperate and incurable disease.

"The reason why, in particular, Somnâth has become so famous, is that it was a harbour for seafaring people, and a station for those who went to and fro between Sufâla in the country of the Zang and China."

It is clear from Albiruni that the idol of Somnâth was merely a solid piece of stone, having no hollow in which jewels and precious stones could be concealed to reward the pious zeal of an iconoclast. As Albiruni says, the top of the stone idol was decorated with precious stones and gold which were thus visible to all at first sight. Mahmud must have seen them before the Brahmins, according to the later writers, offered the ransom. But, as we have seen, both the immense wealth concealed in the belly of the idol, as well as the proffered ransom of the Brahmans, with the zealous answer of the iconoclast, are purely fictitious, the creatures of the imagination of later Mahomedan annalists, who care more for religious zeal than historical truth, and who evidently thought they were doing nothing wrong—on the contrary something highly meritorious—when they converted the plain story of the sack of Somnâth into a pious legend of Yamin-ood-Daula's iconoclastic zeal. The spirit which led these writers to invent this legend, and which made it popular among the Moslems for so many centuries, seems to live among them still to this day, if one may judge from the fervour, with which the ignorant among them believe in it, and the way in which they resent any attempt to show the real character of the legend of Somnâth.

Another myth connected with Somnath in history is the

story of the famous Sandalwood Gates which, eight centuries after they had been rifled from the temple and taken to Ghazni by Mahmud, were paraded by a theatrical Governor-General through the cities of India as a trophy from Afghanistan to soothe the susceptibilities of the injured Hindus. But the gates were spurious beyond doubt, and will live in Indian history as an instance of a clumsy forgery and a huge practical joke.*

R. P. KARKARIA.

* A portion of the foregoing article was read as a Paper before the Bombay Branch of the Royal Asiatic Society.

## ART. X.—THE FIRST INDIAN MEDICAL CONGRESS.

TO say that the holding of the first Indian Medical Congress in Calcutta during the last week of December, 1894, marks an epoch in the history of Western medicine in India, is no mere commonplace.

This Congress emphasised and made patent to all the world, the fact that there exist in India, apart from the medical officers of Government, and a few other European practitioners, a large number of native medical men trained in modern medicine and practising their art on the same lines as is done in Europe.

European medicine was introduced into India by the earliest medical officers of the East India Company. Of the way in which it has taken root and spread over the length and breadth of the land, this Congress, and the volume* we are about to review, are a monument.

The happy idea of holding a Congress originated in Calcutta; that it was brought to a successful termination, is due to the unfailing energies of Drs. Harvey, Simpson and Moir.

In a country like India, it seems to us, a Congress of this sort is even more necessary and useful than in Europe. The medical man practising at home finds it difficult to realise the scientific and professional isolation of his brother practitioner in this country. At home the medical man is within easy reach of the great centres of medical education; he has plenty of professional brothers to exchange ideas with; he, it may be, is a member of a local medical society where the interchange of views and opinions is encouraged. But the position of a European or Native practitioner is far otherwise in India. He is usually in charge of a large district, with plenty of work in his hands, far removed from another practitioner, and he can only warm his hands at the torch of science by means of his weekly "Lancet" or "Medical Gazette." To such a man a meeting like this makes many amends, and the wonder is, not that we are reviewing the transactions of the first Congress, but rather that the idea of holding such a gathering had not occurred before.

We cannot here stop to tell the history of European medicine in India. The progress that has been made formed the subject of the inaugural address of the first President, Surgeon-Major-General R. Harvey, M.D., D.S.O., to whose never-failing tact and energy so much of the success obtained is due.

In considering the work done by medical men in India, a first place must naturally be given to the Indian Medical Service, a

*Transactions of the First Indian Medical Congress, Calcutta, 1895.

service recruited in London and open to all subjects of Her Majesty. Outside this service and the sister service of Her Majesty's British Army, there are to be found but few European practitioners of medicine in India. The vast and increasing body of Native medical men have been taught and trained in medical schools and colleges founded and administered by officers of the Indian Medical Service. In any history of British rule in India, an account must be given of the work done by this service. The civilising influence of the hospitals and dispensaries founded on every frontier of India is profound, and their value has been appreciated by Government. A great statesman once said that the services of Indian medical officers, on the North-West Frontier, were worth those of ten regiments. In softening the rudeness of the border tribesman, now on the Punjab Frontier, now in the heart of Lushailand, the medical aid so freely given has had no little share, and it may be claimed for the Indian Medical Service in their work among frontier tribes :

"*Emollit mores nec sinit esse feros.*"

We must now turn to the volume before us, in which all the papers read at the Congress are collected.

The first criticism that will occur to the medical reader is that, while there is plenty of good clinical, historical, and descriptive accounts of the ravages of disease, there is comparatively little record of work done according to modern methods of research That is to say, the subjects therein treated are discussed rather from the point of view of the busy practitioner than from that of the laboratory scientist.

The explanation is not far to seek. It is the almost entire absence in India of properly endowed and equipped institutions where alone research can be conducted on modern lines. Outside the Presidency towns, and Lahore and Agra, there does not exist the means of conducting such researches. It is by investigations and discoveries of this kind that the scientific progress of a country is judged. Without such institutions progress in this direction is impossible. Medical men, no more in India than elsewhere, can make bricks without straw. The medical men of India are a body of busy physicians and surgeons. It is not to such that we can look for laboratory research. This can be done only by men who devote themselves entirely to such work, and who are provided with the costly and elaborate apparatus of a modern laboratory. In the few cases in India where such opportunity has been given to medical officers, the result has been successful, so successful, indeed, that the wonder is that it has not encouraged Government to make further advances in the same direction.

The attention of Government was called to this matter by a

special deputation, and it is to be hoped that before long we shall see some results.

Let us now consider some of the questions raised and settled in the volume before us.

In more than one case, the papers here published, may be said to put an end to controversy. For example, no one, after reading of the experiences of Drs. Pisani, Vost and Hendley, can have any doubt of the existence of true typhus fever in certain parts of the Northern Punjab. The paper of Surgeon-Colonel G. Hutcheson shows that that disease, known as the plague which so lately played havoc in China, still lingers in many remote villages in Garhwal and Kumaon, not very far removed from some of our hill sanitaria. Considerable attention will probably be given to the papers by Mr. Hankin, the lately appointed Bacteriologist to the Laboratory at Agra. They deal with the bacteriology of cholera chiefly. He has demonstrated for us the great self-purifying power of some of the great Indian rivers, but whether his remarks will apply to the rivers of Western and Southern India to the same extent as they apply to the Ganges or Jumna, is a yet undecided point. Mr. Hankin considers that wells, in the North-Western Provinces, at least, to which his experience is confined, are the great breeding grounds of the cholera vibrio. In spite of what might have been expected, there is no doubt that the great rivers of India are purer than those of Europe. Here we have little or nothing in the way of manufactures to pour their polluting water into the rivers, nor, as a rule, does much of the nightsoil of the towns find its way into them. The absence of these, and the purifying bactericidal influence of the intense sunlight accounts for this difference. We hope to see Mr. Hankin's simple suggestions for disinfecting wells tried on a large scale. If such a cheap and common drug as permanganate of potash (Condy's fluid) can do this, there can be no excuse for not constantly making use of it.

Among the many admirable addresses of the various sectional Presidents, there is none which will attract more notice than that of Dr. Crombie, on the subject of "the Fevers of India." There is no need to dilate upon the prevalence and enormous mortality attributed to fever in India. We all know the limits of the village *chowkidar's* diagnostic powers, and we know that numerous different diseases are grouped by him in the all-embracing term 'fevers;' but if by the term 'fevers' we mean the ravages done by malaria, we shall not find his statistics so very far out after all. Dr. Crombie, in his address, confesses himself a convert to the view that malarial fevers are due to the existence in the blood corpuscles of what is known as the *Amoeba* of Laveran. Dr. Crombie was one of the first in India to demonstrate this organism. In this address he

shows the rôle it plays in producing the various forms of malarial fevers. But, while insisting on the existence of this amœba, and on the curability by quinine of the fevers caused by it, Dr. Crombie is far from thinking that malarial fevers and typhoid epitomise the whole philosophy of the fevers of India.

There has, we cannot avoid thinking, been too much of a tendency of late years, especially as regards the diseases of British soldiers, to consider that every fever which is not curable by quinine, or which shows a tendency to continue for about fourteen or twenty days, must necessarily be typhoid. "When in doubt, say typhoid," may be an admirably safe rule as regards the all-important subject of treatment; but it does not take us very far on the road of discovery. That more than one continued fever exists in India which is not malarial and not enteric, is a common belief among men who have great experience in native practice; but such a fever has not yet been differentiated. Patient and continued examination of the blood, in such cases, is probably the means by which this discovery will be made. If, however, we are to judge of its chances of discovery by the history of the researches into the cause of malaria, we must have patience, though an investigator with all the appliances and means specially set apart for this work could do much. The experiment is certainly deserving of a trial. The examples of the Nizam of Hyderabad and of the Maharajah of Patiala in this respect are worthy of being followed.

Much attention was paid by the Congress to the question of the better organisation of the Sanitary Service in India. We need not here refer in detail to the suggestions made; but one or two remarks made by Dr. W. King in his Presidential address in the Section of Public Health, are deserving of record. He spoke of "the two great scarecrows" used to frighten off sanitarians, *viz.*, the prejudices of the people, and want of funds. The first, he showed, was often exaggerated and used as an excuse, and what existed could be, he maintained, removed by a display of tact. We confess ourselves not quite so sanguine. As for the great scarecrow of "no funds," Dr. King showed that, by giving a little less to the promotion of high class (so-called) education, which now receives many times as much money as the Sanitary Department does, a great deal could be done in making the people healthier and in saving their lives. Such a suggestion, however, in the days of the modern fetish of education, is apt to be disregarded. All the civilised world is calling upon India to enter the lists of the sanitary nations, but this cannot be done without a re-allotment of funds. For our own part, we would prefer seeing a healthy India to an over-educated one.

We need not to refer in detail to the various reforms in the Indian Sanitary Services which were advocated. It is not improbable that within a few years we may see many of the suggestions carried into effect. The medical profession in India is not ignorant of what is wanted; the heads of our departments are constantly pressing upon Government the sanitary needs of the people. Government itself is not wanting in the desire to further sanitation, but Government must be convinced. As long as the experts in bacteriology, with all the resources, the civilisation of Europe can surround them with, are divided in their opinions (and who can deny that this is the case?) how can the head of a department recommend to Government measures based upon a theory which some believe to be true, some to be false? We have a right in India to look to those in Europe, who have all the appliances and means that modern research demands, to furnish us with definite knowledge. At present, we have, except in a few instances, not the opportunity to do this for ourselves in India. We hope one of the outcomes of this Congress will be to enlarge these opportunities. It is easy for a "cocksure" London Editor to criticise. It is easy to find fault, and to abuse if one resolutely shuts one eyes to what has been, and is being done. Mr. E. Hart, like Iago, is nothing, if not critical; but if he had displayed a more humble mind, less of a disposition to find fault, and of readiness to see no difficulty where real difficulties exist, his visit would have been more useful to us and more pleasant to himself.

We do not intend, in the following pages, to touch upon all the subjects treated of in this volume. We will select for discussion a few subjects in which we know the medical men of India are deeply interested, and which also are of interest to the non-medical readers of this review.

There is one subject which we cannot pass over, that was very fully dealt with by the Congress. This is the nature and cause of that form of anæmia which, under various names, is causing such widespread destruction to life and labour in Assam, Ceylon, Fiji, and in whatever country our Indian coolies emigrate to. No one who has read the numerous articles published within the last few years by Drs. Kynsey, Thornhill and Macdonald, of Ceylon, can fail to believe in the excessive prevalence of, and in the loss caused in that island by, the parasite which is known as the *anchylostoma duodenale*. It is well known that the mortality and sickness which took place among the men employed in making the famous St. Gothard tunnel was due to this worm. In Egypt its prevalence is such that one writer has spoken of it as "sapping the life" of the peasant class in that country. Among the bricklayers of the Rhine

Province, in Brazil, in Guiana, in Borneo, in Java, in Cochin, in Japan, this parasite in known to be harmful, and to be the cause of a dropsical anæmia. Its widespread prevalence in Assam has been shown by Dr. Giles. Its life history has been studied and made known by Griesenger, Bilhartz, Lutz, and Leichenstern. Dr. Dobson himself, the foremost opponent of its harmful *rôle*, has shown its wide prevalence throughout Bengal and parts of the N.-W. Provinces.

In the face of all this, how can it be said that this parasite is a harmless one? Will it be believed that a parasite which has been shown to be harmful in Ceylon, Fiji, Japan, Borneo, Egypt and S. America, is harmless in India? This leads up to the question of the nature of the disease known in Assam as *kala azar*. A few years ago, the Government of India deputed Surgeon Major Giles to investigate this disease, to which was ascribed so much mortality. As a result of his investigations and inquiries, Dr. Giles came to the conclusion that, in the vast majority of cases, *kala azar* was due to the ravages of the blood-sucking worm we have mentioned above, that is to say, that it was not a specific disease but a cachectic condition. Soon, however, Dr. Dobson appeared in the field to challenge this view. His position at Dhubri gave him unique opportunities of studying the health of immigrants into Assam. He showed that, not only was this parasite not confined to Assam, but that it was to be found in the bodies of healthy persons coming from numerous parts of Northern India. This discovery seemed to many to throw doubt upon Dr. Giles' explanation of *kala azar*, and Dr. Dobson's authority, without doubt, had much influence in checking, or putting off further research in this direction. But when we remember that hundreds of observers in other countries are agreed that the damage done by this parasite is a veritable reality, we must seek some explanation of the dilemma. For ourselves we are inclined to think, with Dr. Thornhill, of Colombo, that the following are the two great obstacles to a belief in the harmfulness of this worm: *First*, its widespread prevalence in *healthy* people; *secondly*, the fact, so often referred to, that the worm has often only been found in *small* numbers both in the living patient and on *post mortem* examination. A little consideration, however, will, we think, dispose of these obstacles. First of all, the parasite must, in order to cause the cachectic condition attributed to it, have existed in the host in considerable numbers and for a considerable length of time. Let us think for a moment what the presence of 500 or so of these worms in the human intestine really means. Suppose each of these blood-suckers only draws one drop of blood daily —a *very* moderate estimate. Then 500 will drain away over one ounce of pure blood daily. Is it to be seriously believed that

the daily loss of one ounce of blood can be continued for many months without seriously affecting the health of the host? If this will do harm in a healthy, well-fed person, how much more harm will it do in the case of a poor malaria-stricken cooly? There are three factors to be considered,—*first*, the number of worms present; *secondly*, the length of their stay in the intestine; and, *thirdly*, the power of resistance of the host, or, to express this in a mathematical form, the amount of cachexia produced $= \frac{N. T.}{R}$, or is directly proportional to the number of the parasites, and the time of their stay, and inversely proportional to the resistance shown by the individual.

The second stumbling block, to which we have referred, is one, which was answered many years ago in the discussions over the outbreak among the St. Gothard workers. That so few parasites are often found *post mortem*, is partly due to the fact that, the living stream of blood having ceased to flow, many of the parasites have dropped off, and become lost in the dejecta, and, again, in our jails and hospitals, where alone an autopsy is usually obtainable, the patients have been, for longer or shorter periods, removed from those opportunities of reinfection which are constantly taking place as long as the people live within the infected area.

While, therefore, we believe that this parasite plays a very important part in the anæmic dropsy of coolies, and in *kala azar*, we do not for a moment maintain that it is the sole factor in producing these conditions. There is another factor which, in India, we are in little danger of underestimating, *viz.*, malaria. That there is a strong malarial element in all the cachectic diseases of India, we strongly believe, and that malaria has much to do with *kala azar* we admit; but we cannot subscribe to the view either that *kala azar* is merely an intense form of malarial cachexia, or that it is a specific disease quite apart by itself. We incline strongly to the view that there are three cachexias common in India:—

(1.) Malarial cachexia.
(2.) Parasitic cachexia, due to the ravages of the *anchylostoma*.
(3.) A combined, or malario-parasitic, form.

The latter we hold to be the most common. We maintain, then, that *kala azar* is malaria *plus* anchylostomiasis, or anchylostomiasis *plus* malaria, one or other factor being the predominant partner. We would ask those who oppose this view to read again the history of this parasite in other countries, and explain to us how a parasite granted to be harmful in Egypt or Java can be harmless in Assam. We must apologise to our readers for the length of our remarks on this subject; but we believe that in no single respect has more good been done to

medical science in India by the Congress than in thus recalling attention to this parasite, and our thanks are especially due to Drs. Thornhill and Macdonald of Ceylon for their valuable contributions to this vexed question, and for their skilful advocacy of the view we have here endeavoured to maintain.

There are many other subjects dealt with in the volume before us on which we would willingly linger, but space forbids us. That, for example, we have said nothing so far about the inoculations against cholera, introduced by M. Haffkine, is due solely to our inability, in a brief space, to do justice to the single-hearted devotion and scientific enthusiasm which he has shown during his work among us in India. Everyone in India wishes him success in his endeavour to render harmless to us the greatest plague of the country.

Among the many subjects which we must pass over, are some useful papers upon that disease, which seems to single out the most intellectual members of the native community, we refer to diabetes. The paper by Dr. Koilas Chander Bose upon this subject is particularly interesting and instructive.

That the section of surgery is not even fuller than it is, is somewhat surprising, when we consider the unrivalled opportunities surgeons possess in India. The operative treatment of "stone," for example, is but incidentally touched upon. In this connection, however, Dr. A. E. Roberts has given us in his paper on the "Distribution of Vesical Calculus in India," one of the most suggestive, most thoughtful, and best written articles in the whole volume.

The subject of cataract is one which naturally attracted much attention. It is one upon which every surgeon in India must have an opinion. We cannot here enter into a discussion of the various questions raised, but may record that the balance of opinion was in favour of performing the operation of cataract extraction without an iridectomy, except in case of certain well-known complications. The skill and erudite touch needed for this operation is soon acquired from the ample supply of material ever present in India, and, consequently, the surgeon soon finds it a matter of indifference which operation he may have to perform.

Other useful papers on adenoid growths on cranial surgery, on rhinoplasty, we must pass over.

The Department of Military Medicine and Surgery is also well represented. In his Presidential address Surgeon-Major-General Gore depicted the grim fate which awaits the wounded in future wars. He shows that, with modern weapons of precision, the number of wounded must be so great in the next war between civilised nations, that it will be impossible to do more than attempt to attend to a few of them on the field of

battle. The vast majority must be left where they fall till the fighting is over. To attempt to remove them by increasing the number of bearer companies, would only be to increase the numbers slain, for the bearer companies thus exposed would soon be wiped out.

Other papers give interesting accounts of the medical and surgical experiences in the recent Abor and Waziristan expeditions Two papers, by Surgeon-Major A Duncan, and Surgeon-Major Swaby, deal with the effects of the new magazine rifle bullet in war—a subject which has attracted much public attention since the experiences of the Chitral expedition seem to show that this bullet is not capable of stopping the rush of a fanatical enemy. While the use of this rifle seems destined greatly to increase the number of wounded, the actual wound will, it is thought, be more amenable to modern surgical treatment.

A paper by Dr. Luard on some cases of Frost-bite which he met with in the passes towards Gilgit, gives much information on a subject of which medical men in India have little experience. The article by Surgeon-Captain Freyer on "Enteric fever and Teetotalism" should give the final blow to the Macnamara filter, which is still allowed to remain in our barracks. We hope soon to see every barrack, and, indeed, every private house in India (among the richer classes at least), fitted with the only filter which is reliable, the Pasteur germ filter.

In the section on diseases of women are also many admirable papers. We may call particular attention to the address by Dr. Dimmock, to the papers on "Ovariotomy in India" by Dr. Peck and Dr. Sarbadhikari, to that on "The supposed influence of climate upon menstruation" by Dr. Joubert, and to the complete resumè of the subject of puerpural eclampsia by Dr. Kedar Nath Das. We are surprised to see no papers by any of our lady doctors, many of whom attended and took part in the proceedings. Two valuable papers, by Dr. Gibbons and Dr. Jogendra Nath Ghose, on "The biliary cirrhosis of children" are well worthy of study.

In the medico-legal section the address by the Hon'ble W. R. Kynsey, of Ceylon, dealt with a subject recently handled in the pages of this review, *viz.*, that of criminal anthropology. Among the many papers in this section we must refer especially to the practical and useful one on the "Necessity of restricting the free sale of poisons in Bengal," by Dr. Evans and Babu Chuni Lal Bose, the Chemical Examiners to the Government of Bengal. This paper has already attracted the attention of the press, and it is to be hoped that some legal action will follow.

In this section, probably, no subject was more looked forward

to than the antidotal treatment of snake-bite. Dr. Joshua Duke appeared as the chief advocate of the use of strychnine, the alleged remedy introduced by Dr. Mueller of Victoria. This question has now, for several years, been before the medical public of India, and there are few Surgeons who have not had an opportunity of trying it. Unfortunately, however, no matter what the effect of this drug may be in bites of Australian snakes, the experience of India is against it. This result is in great part due to the long series of experiments undertaken by Dr. Elliot of the Medical College, Madras. For ourselves, we look rather to experiments, such as are now being conducted by Dr. Fraser, of Edinburgh, for the successful treatment of this complaint. These investigations are being carried out on the same lines as led to the discovery of the antitoxins of diphtheria and tetanus about which much has been heard lately.

To conclude, we have thus rapidly surveyed the wide extent of work with which this volume deals. We have passed over much excellent matter. We mention Dr. Hendley's (of Jeypore) articles on the early records of the Bengal Medical Department, only to say, we hope in the future that Dr. Hendley will have time to write a complete history of the Indian Medical Service. Such a work could not be in more competent hands than his. We must also pass over the question of leprosy in India, not, however, without calling attention to the well-written article on this subject, by Dr. Carleton, of Sabathu. We must also call the attention of those who are interested in what is called the vivisection question, to the temperate, forcible, and, in our opinion, convincing paper on the necessity for a Pasteur Institute for India, by Surgeon-Major-General R. Harvey. The valuable description of the arrangements which resulted in the great sanitary triumph in the management of the great fair at Hurdwar in 1891, by Surgeon-Colonel Hutcheson, should be studied by all who are interested in sanitary questions in India.

On the whole, the volume we have here reviewed is one which the medical profession in India may be proud of. We congratulate them on the success of the first Medical Congress of India. We hope the good example of the promoters will be followed, and that we may have to chronicle the equal, or even greater, success of similar meetings, which can only result in good to the people of India.

# THE QUARTER.

THE event of the past Quarter, and one which will make it memorable in the political history of the century, has been the defeat and resignation of Lord Rosebery's Ministry, and the signal victory of the Unionist Party at the polls by which it has been followed.

The occasion of the defeat was of so insignificant a character, that the action of the Ministry in treating it as a vote of want of confidence can have been due only to a foregone determination to embrace the first convenient opportunity of escaping from an impossible position. In Committee of Supply on the 21st June, Mr. Brodrick, on the vote for the War Office, called attention to the inadequacy of the store of small arms ammunition, and moved, by way of protest, that the salary of the Secretary of State for War be reduced by £100. After a reply from Mr. Woodall, asserting that the output of the ordnance factories had been enormously increased, and that, in case of necessity, they could supply any conceivable demand for cordite, Mr. Campbell-Bannerman rose and assured the Committee, on the responsibility of his military advisers, that the supply of small arms ammunition was ample. A division being taken, after some further discussion, during which Mr. Balfour asked for figures on the subject, the motion for the reduction of the vote was carried by 132 to 125, and Mr. Campbell-Bannerman, after moving to report progress, immediately left the House. At the next sitting of the House, on the 24th June, the Chancellor of the Exchequer announced that the Government, absolutely identifying themselves with the Secretary of State for War, and regarding the vote as one of censure on him, had found it their duty to tender their resignation, which had been accepted by Her Majesty.

Her Majesty immediately sent for Lord Salisbury, who, after a delay of twenty-four hours, attributed to the indisposition of the Unionists to accept office without an assurance of the support of the outgoing Ministry in winding up the Session, accepted the task of forming an administration. This was practically completed in the course of the week, and on Saturday the 29th June, the members of the new Cabinet received their seals of office.

The following is a list of the principal appointments :—

| | | |
|---|---|---|
| Prime Minister ... | ... | ... Marquis of Salisbury. |
| Lord President of Council ... | | ... Duke of Devonshire, |
| Lord Chancellor ... | ... | ... Lord Halsbury. |

| | |
|---|---|
| Lord Privy Seal ... ... ... | Viscount Cross. |
| Chancellor of the Duchy of Lancaster ... | Sir Henry James. |
| Chancellor of the Exchequer ... | Sir Michael Hicks Beach. |
| Secretary of State, Home Department ... | Sir Matthew White Ridley. |
| Secretary of State for Foreign Affairs ... | Marquis of Salisbury. |
| Secretary of State for the Colonies ... | Mr. Chamberlain. |
| Secretary of State for War ... | Marquis of Lansdowne. |
| Secretary of State for India ... | Lord George Hamilton. |
| First Lord of the Admiralty ... | Mr. Goschen. |
| First Lord of the Treasury ... | Mr. Balfour. |
| President of the Board of Trade ... | Mr. Ritchie. |
| President of the Local Government Board | Mr. Chaplin. |
| Lord Lieutenant of Ireland ... | Earl Cadogan. |
| Lord Chancellor of Ireland ... ... | Lord Ashbourne. |
| Secretary for Scotland ... ... | Lord Balfour of Burleigh. |
| First Commissioner of Works ... | Mr. Akers-Douglas. |
| President of the Board of Agriculture ... | Mr. Walter Long. |

(The above form the Cabinet.)

| | |
|---|---|
| Financial Secretary to the Treasury ... | Mr. Hanbury. |
| Under-Secretary for Foreign Affairs ... | Mr. Curzon. |
| Under-Secretary for War ... ... | Mr. St. John Brodrick. |
| Chief Secretary for Ireland ... ... | Mr. Gerald Balfour. |
| Postmaster-General ... ... | Duke of Norfolk. |
| Vice President of the Council for Education ... ... ... | Sir J E. Gorst. |
| Patronage Secretary to the Treasury ... | Sir W. H. Walrond. |
| Secretary to the Admiralty ... .. | Mr. W. E. Macartney. |
| Civil Lord of the Admiralty ... | Mr. Austen Chamberlain. |
| Under-Secretary, Home Office ... | Mr. Jesse Collings. |
| Under-Secretary, Colonial Office | Earl of Selborne. |
| Parliamentary Secretary, Local Government Board ... ... | Mr. T. W. Russell. |
| Financial Secretary, War Office | Mr. Powell Williams. |
| Attorney General ... | Sir Richard Webster. |
| Lord Steward ... ... | Earl of Pembroke. |
| Lord Chamberlain ... | Earl of Lathom. |
| Under-Secretary of State for India | Earl of Onslow. |
| Master of the Horse ... | Duke of Portland. |

Parliament was dissolved on the 8th July, and the elections, which commenced immediately, have resulted in a net gain of ninety seats by the Unionist Party, representing a transfer of some 263,000 votes, and giving them a majority in the House of 152, the Separatists thus sustaining the most crushing defeat suffered by any political party since the General Election of 1832.

In London 54 Unionists have been returned, against only 8 Separatists; Great-Britain, as a whole, has returned 390 Unionists, against 177 Separatists; England alone 349 Unionists, against 116 Separatists; Wales alone 22 Separatists, against 8 Unionists; Scotland 39 Separatists, against 33 Unionists; Ireland 82 Separatists, against 21 Unionists.

The composition of the new House is made up as follows:—Conservatives 340; Liberal-Unionists, 71; Radicals 177;

Anti-Parnellites, 70; Parnellites 12; the Conservatives thus commanding a majority of ten over all other parties combined.

Among late Ministers and well-known or notorious members who have lost their seats, are Mr. John Morley; Mr. Shaw Lefevre; Mr. Arnold Morley; Sir Edward Reed; Mr. George Russell; Mr. A. S. Brand; Mr. H. W. Lawson; Mr. Conybeare; Mr. Seymour Keay; Mr. Caine; Mr. George Howell; Mr. Cremer; Mr. Keer Hardie; Sir George Newnes and Mr. Dadabhai Naorojee. But the most significant of all the Separatist defeats was, that of the late Chancellor of the Exchequer at Derby, for whom, however, a safe seat was subsequently found by the retirement of Mr. Warmington in West Monmouthshire. One of the surprises of the elections was the return of Mr. M. M. Bhownuggree, the Indian Unionist candidate for Bethnal Green, by a majority of 160 over the late member, Mr. George Howell.

Though it was generally anticipated on both sides that they would obtain a majority, the magnitude of the victory actually achieved by them has taken even the Unionists themselves by surprise. The *Times*, on the very eve of the contest, did not venture to calculate on a majority of more than 50 or 60. The cause of so remarkable a revulsion of popular feeling has naturally furnished food for much speculation. Among the Separatists the disposition is to attribute it mainly to a conspiracy between the Church and the publicans; and they utterly repudiate the idea that it can be regarded as in any way a verdict against Home Rule. In the former view there is a grain, and only a grain, of truth; the latter, in one aspect, is far from wholly wrong. The Welsh Disestablishment Bill has no doubt done something, and the Local Option Bill more, to swell the Unionist majority; but the Church and the licensed victualler were so generally supported the Unionists at the last election, that it is doubtful whether any possible transfer of votes in these quarters would alone have sufficed even to extinguish the Separatist majority. A multitude of elements, no doubt, contributed to the result; but, on the whole, it is probably less a condemnation of any particular item in the programme of the late Government, than a protest against its utter failure to accomplish anything useful. The "Ireland blocks the way" policy was one which, unless it was attended by immediate success, was doomed inevitably, as time went on, to alienate all but the most bigoted supporters of the late Ministry. To expect the people of England, the bulk of whom probably care very little about Home Rule one way or the other, to go without useful and much needed legislation for an indefinite number of years, in order to wear down opposition to it,

was to show a lack of knowledge of human nature which, in so calculating a statesman as Mr. Gladstone, is positively startling. The situation was not improved when for this policy was substituted that of "filling up the cup," by passing through the House of Commons bill after bill which it was known the Lords would reject, in order to raise a tempest that should sweep the obstruction away. Had the elements responded to the provocation, all might have been well for the time being, and the Ministry, instead of being sent about their business, might have been strengthened for fresh endeavours. But when, for all the emptyings of the Ministerial windbags, not a leaf stirred, it is not to be wondered at that the people declined to assist any longer, with empty stomachs, at a farce which might otherwise have gone on till the crack of doom.

The situation is admirably described by the writer of an able article in the current number of the *Edinburgh Review*. "For three years past," he, says, "the Parliamentary record has "been a miserable one. Failure on the part of the House of Commons to perform the duties which the country expects of it, as the great council of the realm, has been conspicuous. It has shown itself incapable of doing its own legislative work, or of giving strength and confidence to the Executive Government. Never did a House of Commons live in such perpetual dread of a general election. Wearily, yet assiduously, it toiled on at the work the Government asked it to perform. At the request of the Government all business, other than its own, was abandoned, and night after night, and month after month, the representatives of the people were kept marching through the division lobbies, and recording majorities of an almost fractional magnitude in favour of far-reaching propositions which were never destined or expected to become law. Still the Government of Failure was kept in office. Whilst, however, the legislative projects of the Government were at a standstill, and the energies of the House of Commons were consumed in the performance of this kind of parliamentary goose-step, the political situation outside Parliament was steadily changing."

The general character of the domestic policy of the new Government is sufficiently indicated in the speeches delivered during the crisis by Lord Salisbury, Mr. Balfour, Mr. Goschen and Mr. Chamberlain.

Speaking in the House of Lords, immediately before the prorogation, Lord Salisbury, after commenting on the long vista of revolutionary changes with which the Radical leaders were threatening the country, remarked :—

"The energies of Parliament would be more beneficently directed to the solution of pressing problems connected with

the deplorable state of agriculture, the overcrowding of our large towns through the constant influx of the rural labourers, and the distress entailed on masses of deserving working people by the vicissitudes of trade. Good work might further be done by inducing our citizens to become freeholders of their own dwellings, thus adding to the stability of the Constitution, while strengthening the foundations of national prosperity. The new Government, while avoiding all ambitious programmes and subversive projects, would do their utmost to alleviate the misery and mitigate the lot of many millions of their fellow-countrymen."

"We think," said Mr. Balfour, in his address to his constituents, referring to the subversive projects of the late Ministry, "the time of Parliament cannot be worse employed than in thus carrying out these revolutionary designs. or better employed than in furthering legislative changes which may perhaps excite less controversy, but touch more nearly the daily life of the people. Without entertaining unreasonable hopes as to the good which Acts of Parliament are able to accomplish, we hold that there is sufficient to be done, both in town and country, both in Great Britain and in Ireland, to tax all the energies of that Legislature. The better housing of the working classes, the encouragement of the freehold occupancy, the amelioration of the lot of the aged poor, the protection of agricultural tenants in their improvements, the preservation of voluntary schools, the provision of compensation to injured working men, the easing of the heavy burdens under which British agriculture is in danger of sinking, and the opening of markets for British industry are some of the subjects on which the labour of a Unionist Government and of the Unionist party may well be expended. In respect to some of them much may, I believe, be done, and should you return us to power we must strenuously endeavour to do it.

"You may depend," said Mr. Goschen, adressing a meeting at Norwich "on the untiring efforts of the Unionist Government to labour assiduously in the ever-widening field of such practical legislation and social reforms as marked the activity of Lord Salisbury's last administration, and in the pursuance of these objects a Unionist majority will eschew those appeals to the antagonism of classes, those attacks on property as the enemy rather than the ally of labour, that invasion of individual rights, which characterised so much of the language as well as of the proposals of the last Government and their friends. By them the solidity of the interests of the various sections of the community was constantly ignored, the existence of the great middle class too often forgotten, and their wishes set aside.

"In questions affecting London, the late majority and their leaders invariably supported the most aggressive policy of the London County Council. No scheme in their eyes appeared too costly, no prospective burdens on the rate-payers too heavy, to justify the interposition of Parliament. They were always prepared simply to register the decision of the Progressists in the Council.

"While I shall strenuously support, if returned to Parliament, the rigid enforcement of sanitary laws, a continued improvement in the housing of the poor, and enlightened action in generally meeting the growing wants of the metropolis, I shall not forgot that there is a limit to the burdens which can equitably be placed upon the rates.

"The continued existence of voluntary schools, due to the persistent effort of the Conservative party and to the private liberality of men belonging to various religious denominations, have preventd the imposition of yet more formidable charges on local resources than those which they already have to bear. From all points of view, I regard the protection of these schools as a question of the highest importance."

Mr. Chamberlain, speaking at Canterbury, said :—

"The policy of the Government was to promote temperance without ruining the publicans, to secure for the working classes the protection to which they were entitled, and to elevate their position without destroying the industries on which their livelihood depended. They wanted to complete the system of local government in London without making everything dependent on a great, overgorged, centralizing bureaucracy. They hoped to do something for the improvement of working-class dwellings, and to assist in making better provision for the aged and industrious poor. They would also make a serious effort to deal comprehensively with the question of employers' liability. Between such a policy as this, and the programme of the destructive party, it was for the constituencies to choose."

Sir Michael Hicks Beach, speaking at Bristol, observed that the whole question of local taxation would receive the careful consideration of the Government, with a view to its equalisation.

In the department of foreign p licy, a heavy task awaits the new Ministry. The Armenian question which has reached an acute stage; the settlement of our relations with France in Africa and on the Burmo-Chinese frontier; the steps to be taken to obtain satisfaction from China for the recent outrages on Missionaries in that country, and the policy to be adopted by England in future eventualities in the far East, are all questions which call for immediate attention and resolute treatment;

while there is every indication that serious trouble is looming in the near future in connexion with the British occupation of Egypt.

One of the first acts of the new Government has been the reversal of the policy of their predecessors with regard to Chitral. From the blue-book which has just been published, it appears that on the 8th May, the Government of India reported that they were unanimously in favour of retaining a British garrison in Chitral, and keeping the road open ; but Mr. Fowler, on the 13th June, telegraphed that he did not concur with the Government of India, and directed them to evacuate Chitral as soon as arrangements could be made for its future administration. That decision was not absolutely inconsistent with the occupation of the State for an indefinite period ; but it amounted to a repudiation of all intention of prolonging, or perpetuating it for stratigical purposes. Lord Salisbury has boldly accepted the latter responsibility, and decided that Chitral shall be permanently held by a moderate British garrison, and arrangements be made with the Khan of Dir and the tribes to maintain and protect the direct road thither. Until such arrangements can be carried out, a sufficient force will remain in the country for the purpose, and the rest of the expedition are being withdrawn as rapidly as possible. Lord Salisbury is reported to have declared that the adoption of this policy will be attended by no addition to our military expenditure ; and, though this may not be literally true, no doubt there will be an important set off to any burden it may entail, in the shape of a reduction of the very costly garrison of Gilgit.

Immediately before the vote which decided the fall of Lord Rosebery's Ministry, Mr. Campbell-Bannerman announced that, on the 1st October, His Royal Highness the Duke of Cambridge would relinquish his position as Commander-in-Chief, and that Her Majesty's Government had determined on reforming the War Office on the main lines of the Report of the Hartington Commission, and it has since been further announced that the Office of Commander-in-Chief has been conferred on Lord Wolseley.

The chief features in the new scheme for the organisation of the Department are, that the Commander-in-Chief will command the forces at home and abroad, issue all army orders, hold inspections, and be responsible for commissions, promotions, appointments, honours and rewards. He will be the principal adviser of the Secretary of State for War, and, together with the heads of the Military Departments, will act as a Board for the discussion of matters referred to it by that functionary. All promotions and appointments above the rank of Major will be submitted to the Board.

The appointment of Lord George Hamilton as Secretary of State for India, taken in connexion with the speech he made in the course of the debate in the House of Commons on the subject, on the 21st February last, has not unnaturally given rise to grave apprehensions in this country, lest the new Ministry should take an early opportunity of reversing the policy of their predecessors in the matter of the cotton duties; and these apprehensions have been, in some measure, confirmed by the statement made by the Secretary of State on the 21st August, in reply to a question of the Hon'ble E. Stanhope, to the effect that he had received a memorial from the Lancashire mill-owners against the duties, which would be sent to the Government of India, that they might state their side of the case. Being further asked whether the Government intended to repeal the duties, Lord George Hamilton referred the questioner to the speech already mentioned, and added that he ought not to be expected to give an opinion on the subject, till the Government of India had had an opportunity of fully stating their views.

In view of the unsatisfactory nature of the replies received from the Sultan's Government to the demands of the Powers, with reference to the administration of Armenia, a second great public meeting was held on the 6th August at Chester, the Duke of Westminster presiding, for the purpose of considering the position and urging on the Government the necessity of decisive action. A powerful, but, on the whole, exceedingly moderate speech was made on the occasion by Mr. Gladstone, who, while advocating moderation in the demands preferred, insisted strongly on the necessity for coercion if they were not complied with.

"I for one," he said, "for the sake of avoiding other complications, would rejoice if the Government of Turkey would come to its senses; if only men like Fuad Pacha and Ali Pacha, who were in the Government of Turkey after the Crimean War, could be raised from the dead, and could inspire the Ottoman policy with their spirit and their principles. That is, in my opinion, what we ought all to desire, and though it would be infinitely more agreeable to all of us to acquit Turkey, than to find her guilty of these terrible charges, yet if we have the smallest regard for humanity, if we attach any good faith to treaties, if we are sensible at all of what is due to our own honour after the steps which have been taken within the last twelve or eighteen months, we must interpose. We must be careful to demand no more than what is just, but, at least, as much as is necessary. We must be determined that, by the kelp of God, so far as depends upon us, that which is necessary and that which is just, shall be done, whether there be resistance, or whether there be none."

A resolution was passed by the meeting—"That this meeting expresses its conviction that Her Majesty's Government will have the cordial support of the entire nation, without distinction of party, in any measures which it may adopt for securing to the people of Turkish Armenia such reforms in the administration of that province, as shall prove effective guarantees for the safety of life, honour, religion and property, and that no reforms can be effective which are not placed under the continuous control of the Great Powers of Europe."

The latest information as to the attitude of the Turkish Government is that, while it has acknowledged the necessity of reforms, and consented to entrust their execution to the High Commissioner, Shakir Pasha, and to give him a free hand, it is determined to resist the demand of Great Britain, that the administration of the province shall be under European supervision and control. Such control, however, is regarded by Her Majesty's Government as indispensable, and there is every reason to believe that in this, it is supported by the other Powers, which have returned unfavourable answers to an appeal made to them by the Porte, to get them to induce Great Britain to modify her demands. There is little doubt that, should the Sultan persist in his present attitude, armed occupation of Armenia will follow.

The latest news from Madagascar is that the French have captured Andriba, which was evacuated by the Hovas, with the loss of only one man killed and three wounded. The sickness and mortality among the troops are, however, reported to be appalling.

As far as the relations between China and Japan are concerned, the position in the Far East is practically unchanged. The negotiations between the two Powers for the evacuation of Port Arthur and the Liaotung Peninsula have been brought to a conclusion, China undertaking to pay an additional indemnity of £7,500,000 for the retrocession of the territory. The greater part of the Japanese forces have been withdrawn from the Peninsula, and the fortifications of Port Arthur are being dismantled preliminarily to its evacuation. Wei-hai-Wei is apparently to be retained as security for the payment of the indemnity; and the Japanese are reported to be strengthening their hold on the Corea with a view to future eventualities in that quarter, where a conflict with Russia is regarded as, sooner or later, inevitable. A new aspect has, at the same time, been given to the situation by the agreements and treaties entered into by China with Russia, on the one hand, and France, on the other. Ostensibly with the view of facilitating the evacuation of Liaotung Peninsula, Russia has guaranteed a loan of sixteen millions sterling to China, which has been

raised mainly in Paris, on the security of the Customs, on which she obtains a first lien after existing creditors. Though it is officially stated that Russia has no ulterior object in this transaction, out of which she makes a considerable profit, the general belief is, that it is the price for concessions of an important character, including, probably, the right to divert the Siberian railway through Chinese territory to some port which will remain open during the winter months.

Of more immediate importance to England are the concessions which France has succeeded in obtaining from China in return for her assistance in inducing the Japanese to retire from the mainland. The following is said to be the substance of the treaty which has been concluded between the two Powers :—

Clause 1 grants to France the right to maintain a Consular Agent at Tien-heng. Clause 2 opens up Lung-chau, in the province of Kwang-si, north of Lang Son, to French and Anamite trade. It also renders Hoi-hau an open port, and gives France the right to maintain a Consul there. By Clause 3 Szu-mao-ting, situated between the Me-kong and the Nam Tay, north-north-west of Luang-Prabang, will be opened to trade, and French subjects will be authorized to settle there and to arrrange for the transport of merchandise by the Lo-so and Me-kong rivers, and by the route known as the Mandarin route. Clause 4 contains provisions for a reduction of Customs dues. Clause 5 deals with the working of the mines in the three provinces of Kwang-tung, Kwang-si, and Yun-nan, and gives French engineers a right of priority. It also gives France the right to extend the network of Anamite railways. Clause 6 gives France the right to establish telegraphic communication with Szu-mao-ting and Muang Hun. Tariffs must be fixed according to the Convention of Chifu. Clauses 7 and 8 contain special trading stipulations.

In addition to these important concessions and privileges, it is understood that China has ceded to France two out of the twelve districts constituting the State of Keng-hung, which was made over by Great Britain to China last year, on the condition that China would cede no portion of it to any other Power without first obtaining her consent. This is a breach of the recent Convention which it would be impossible for England, under any circumstances, to ignore, and which is rendered more important by the strained state of her relations with France, and the fact that the districts said to have been ceded are the key of Yunan. It is stated that Lord Salisbury has lodged a formal protest against it at Pekin.

In the meantime events have occurred in China which call for the united action of the Powers, and which have already

been made the subject of a peremptory demand for satisfaction on the part of Great Britain. The weakening of the central authority in the provinces has been followed by a recrudescence of the latent hostility to foreigners, and especially to missionary enterprise; and a series of violent, and in several cases murderous, outrages have been perpetrated against the missionaries in the provinces of Szechuang and Fohkien.

In the former province, where the mob are said to have been instigated, or at all events encouraged, by the late Viceroy the notorious Lin Ping Chang, the missionaries have been expelled from the cities of Kiung Chau, Yachau, Kiating, Sing Chin, Sinfu, Pingshan, Luchau, in which places all foreign property has been destroyed; but no lives appear to have been taken. In Fohkien, where the outbreak was the work of the Society of Vegetarians, a terrible massacre of British Missionaries, in which neither age nor sex was spared, has occurred at Whasang, near Kuching. Similar riots have also taken place in the neighbourhood of Foochow, where the houses of the foreign residents have been burnt, and the chapel, school-house and American mission wrecked, and at Fatshan, near Canton, where the British and American missions were attacked and the hospitals demolished.

Lord Salisbury has demanded a decree, which has been granted by the Pekin Government, for the death of the authors of the massacres, and a commission of enquiry, consisting of the British and American Consuls, an American Naval Officer and three Missionaries, under a Chinese prefect, has been despatched to the spot, and has already made numerous arrests and convicted several of the offenders.

A formidable Mahomedan rebellion has also broken out in the Province of Kansuh, and is reported to be spreading.

Parliament was opened by commission on the 15th August.

Her Majesty, in her speech from the Throne, which was read by the Lord Chancellor, said: "I have received communications from the Foreign Powers, which assure me of a continuance of their goodwill. No complication has arisen in any quarter calculated to endanger the peace of Europe, and I trust that the peace concluded between China and Japan will be enduring. I have observed strict neutrality, and taken no action in respect thereto, except such as appeared likely to favour the termination of the war. I deeply regret the atrocious outrages on English missionaries in the province of Fukien, where the Chinese Government are taking active measures, which I hope will result in the effective punishment of the murderers and all persons in any degree responsible for them." Alluding to the troubles in Armenia, Her Majesty said: "They have been attended with horrors which have moved the indignation

of all Christian nations in Europe, and of the English people especially, and Her Majesty anxiously awaits the decision of the Sultan regarding reform in that quarter, jointly suggested by the British, French, and Russian ambassadors as being necessary to prevent a recurrence of constant disorder." Considering the season of the year, Her Majesty said that it would probably be found more convenient to defer, until another session, the consideration of any important legislative measures, except those necessary to provide for administrative charges.

The address in reply was voted on the 21st, after a motion by Mr. Redmond, demanding a statement of the Irish policy of the Government had been rejected by a majority of 130, and on the 19th idem, a motion, giving Government the whole time of the House for the remainder of the session, was voted by a majority of 148.

In India the period under notice has been more than usually uneventful, the chief incident of importance being the passing of the Bengal Sanitary Drainage Bill, after considerable modification at the hands of the Select Committee. The measure, if worked with proper caution, is likely to be productive of very beneficial results; but it is open to two grave objections. One is that, while the works to be undertaken are for the benefit of the entire population of the province, their cost is imposed exclusively on the landed interest; and the other is that, though this is the case, the power of determining what works shall be undertaken is vested mainly in the District Boards, in which the landed interest is very inadequately represented.

An important Bill has been introduced into the Legislative Council at Simla for the purpose, ostensibly, of giving effect to certain of the recommendations of the late Commission for the Improvement of the Jury system in India. The main object of the Bill is to enable the Judge in Sessions cases to require the Jury to return a verdict on special facts, instead of, or supplementary to, a general verdict of guilty or not guilty, and also to facilitate references to the High Court in cases in which the Judge disagrees from the verdict returned. Another measure of some importance, affecting the Mahomedan community, which has been introduced in the Viceregal Council, is the Pilgrim Ships Bill, for regulating the conditions under which pilgrims shall be carried by sea from British Indian ports. The Bill, which has been introduced under the orders of the Secretary of State, for the purpose of bringing the regulations on the subject into conformity with the conditions laid down by the recent Convention at Paris, is creating considerable dissatisfaction among the Mahomedans, on the

ground that certain of the new restrictions are of a needlessly vexatious character, and will add largely to the cost of the voyage ; and the justice of these contentions is, to a large extent, admitted by the Government of India, which, though technically a party to the Convention, had no proper opportunity of placing its views before the Conference.

It is officially announced that Sir Alexander Mackenzie has been appointed to succeed Sir Charles Elliott in the Lieutenant-Governorship of Bengal.

*September 8th, 1895.*

# SUMMARY OF ANNUAL REPORTS.

*Annual Report on the Police Administration of the Town of Calcutta and its Suburbs for the year* 1894. By the HON'BLE SIR JOHN LAMBERT, K.C.I.E, Commissioner of Police, Calcutta. Calcutta: Printed at the Bengal Secretariat Press. 1895.

THE total number of offences, cognizable and non-cognizable, reported in the town of Calcutta and its suburbs during 1894, was 54,526.

There has, however, been an increase of 4,960 cases in the town and 1,772 in the suburbs, or 6,732 cases in all. Of this increase, 6,044 fall under the class of miscellaneous offences, viz, street offences, 1,163; cruelty to animals, 2,272; municipal prosecutions, 2,274; and offences under the Hackney Carriage Act, 1,066, while 688 only come under the Penal Code.

The total number of cases tried in the town and suburbs during the year was 42,559, of which 32,968 ended in conviction. Out of 27,513 cognizable cases sent up by the police, convictions were obtained in 25,707, or 93·4 per cent.; while out of 1,549 cognizable cases taken up by the Magistrates direct, convictions were obtained only in 662, or 42·7 per cent.

Property to the value of Rs. 1,83,787 was stolen in the town and suburbs during the year, as compared with Rs. 1,27,776 in the previous year; and Rs. 1,25,215 worth, or 68·14 per cent. was recovered, against Rs. 92,938, or 72·73 per cent., in the previous year.

There were nine cases of murder during the year, or the same number as in 1893. In two cases the offenders were transferred to other districts for trial; in two other cases the murderers committed suicide, and in the five remaining cases, four offenders were hanged, and one was transported for life. There were four cases of culpable homicide, three of which resulted in conviction; in the fourth case, the second officer of a vessel was charged with having caused the death of the ship's boy by a long course of ill-treatment on the high seas, but was discharged on the evidence of the ship's doctor that the boy died of meningitis brought on by malarial fever.

Sir John Lambert describes how a new form of fraud, which has appeared of recent years in Calcutta, viz., cheating by bogus firms, is practised. The proprietors of these swindling establishments are all Bengalis, who adopt the names of European firms. They advertise widely in remote parts of the country stating that their terms are cash, and giving, in some cases, a fictitious address, and in other cases the private address of one of the conspirators, arrangements being made with the local

post-office to keep all letters and money-orders till called for.

The total loss of property from fires during the year is estimated at Rs..8,84,976, as compared with Rs. 6,10.524 in 1893. Four fires occurred in which property w th over a lakh was lost—one on board the flat *Banna*, laden with jute, one at the Hydraulic Jute Press at Chitpore, and two at the Howrah Mills, Sibpur, in buildings filled with jute. The most serious of these was that at the Hydraulic Jute Press at Chitpore, whereby property to the value of Rs. 2.27,002 was destroyed. Three lives were lost at fires during the year.

The total strength of the police force was 2,889, against 2,873 in 1893, an increase of 16 men having been made in the Government guards.

During the past year 405 persons, arrested for offences against property, whose antecedents were unknown to the local police, were anthropometrically measured, and previous convictions thereby traced against 31 of them.

The number of Honorary Magistrates who attended one or more sittings of the Bench was 88, and the average number of sittings of these Magistrates was 13, as compared with 11·6 in the preceding year. Exclusive of municipal cases, 1,159 cases were transferred to the Bench Magistrates, 934 to Honorary Magistrates sitting singly, and 1 case was taken up by the Honorary Magistrates voluntarily, making a total of 2,094 cases.

The Chief Presidency Magistrate again bears testimony to the excellent services rendered by the Honorary Magistrates of Calcutta, and remarks that their efficiency would be greatly enhanced if the Courts would always sit punctually at the appointed hour, and timely notice were sent in case of their being unable to attend. He at the same time records his thanks to twenty-four Magistrates who have attended to complete a Bench at a moment's notice.

---

*General Report on the Survey of India Department, administered under the Government of India during* 1893-94. Prepared under the direction of COLONEL SIR HENRY R. THUILLIER, K.C.I.E., R.E, Surveyor-General of India. Calcutta : Office of the Superintendent of Government Printing, India. 1895.

THE field operations during the year under review were carried on by twenty parties (of which two were double parties) and four small detachments. The various classes of work on which they were engaged are shown below :—

| | Class of work. | Number of parties employed. | Number of detachments employed. |
|---|---|---|---|
| 1. | Trigonometrical ... | 1 | ... |
| 2. | Topographical .. | 3 | 2 |
| 3. | Forest (excluding the Imperial Forest Survey Branch) | 4 | ... |
| 4. | Cadastral ... ... | 6 (two double) | 2 |

| | | | |
|---|---|---|---|
| 5. Traverse ... | ... | 1 | ... |
| 6. Scientific ... | ... | 3 | ... |
| 7. Geographical ... | . | 2 | . |
| Total .. | | 20 | 4 |

The aggregate area surveyed on all scales during the year under report was 127,477 square miles, against a total of 104,711 square miles in 1892-93. These figures do not include the traverse operations carried on in the Central Provinces as a basis for field surveys under the Settlement Department, or the skeleton survey of village boundaries in Bengal. These two operations covered a further total area of 3,572 square miles in 1893-1894, and of 3,563 square miles in the preceding year.

The party which has been employed during the past three years on trigonometrical surveys extended the principal triangulation northwards in Upper Burma over a direct distance of 90 miles, besides carrying a secondary series of triangles over 70 miles along the coast south-eastwards from Karachi.

The present report includes for the first time an account of the operations of the Forest Survey Branch, which is under the administration of the Inspector-General of Forests, and under the superintendence of a Deputy Superintendent of the Survey of India Department. During the year the Branch surveyed 1,433 square miles of forest proper, situated in the Punjab, the Central Provinces, Oudh, and Burma, as well as of 287 square miles of non-forest land in Bashahr (Punjab).

It is understood from the Inspector-General of Forests that these forest maps meet all forest requirements both in accuracy of detail and in neatness of execution. Under these circumstances the Government of India do not consider it necessary to provide for more costly supervision.

The value of the extra-departmental work done in the Photographic and Lithographic offices decreased from Rs. 91,118 to Rs. 71,141, owing to a smaller demand. On the other hand, the value of original maps and drawings increased from Rs. 81,128 to Rs. 98,760. The quality of the work executed under Colonel Waterhouse's supervision maintained its high standard of excellence. Two specimens of photo-etching given in the report as a frontispiece and at page 118, are admirable specimens of what the department can do in the way of artistic finish ; while the map work, for accuracy and clearness, leaves nothing to be desired.

The demands on the Mathematical Instrument office for scientific instruments were considerably less than in 1891-92 and 1892-93 ; but there was a larger outturn of work in the shape of repairs.

Pages 16 and 17 contain a summary of the operations of the Department for the nine years during which it has been under the administration of Colonel Sir Henry Thuillier, R.E., who

has recently retired from the office of Surveyor General of India. During that period the area covered by Cadastral, Forest, Topographical and Geographical surveys, aggregated 844,218 square miles. The surveys of 17 cities and towns, including Calcutta, have also been mapped on various large scales ; while 93,694 square miles of traverse surveys, and 25,140 square miles of principal and secondary triangulation, have been completed during the same period. Upper Burma has been added to the Geographical map of India ; the latitude and longitude observations have been completed ; the system of tidal observations and predictions has been largely extended ; and a double line of spirit levelling has been carried over a distance of more than 4,000 miles. The Governor-General in Council has already taken occasion to express his sense of the value of Colonel Thuillier's services.

---

*Report on the Legal Affairs of the Government of Bengal for the year* 1894-95. Calcutta : Printed at the Bengal Secretariat Press. 1895.

THIS report was due on the 15th May, but it was not received till the 24th June. The Legal Remembrancer again adverts to the difficulty of submitting it in time.

The subjoined figures give the results of Government litigation in all the Civil Courts of Bengal during 1894-95 :—

| | |
|---|---|
| Decided in favour of Government ... | ... 173 |
| Decided against Government .. | ... 50 |
| Compromised, remanded, or withdrawn | ... 25 |
| Percentage in favour of Government .. | ... 77·5 |

Excluding cases under the Land Acquisition Act, the figures are as under :—

| | |
|---|---|
| Decided in favour of Government ... | ... 148 |
| Decided against Government ... | . 49 |
| Compromised, remanded, or withdrawn | ... 23 |
| Percentage in favour of Government ... | ... 75·1 |

The following shows the results of Court of Wards' litigation during the year in all Courts :—

| | |
|---|---|
| Decided in favour of Court of Wards ... | ... 1,561 |
| Decided against ditto ... | ... 215 |
| Compromised, remanded, or withdrawn | ... 49 |
| Percentage in favour of Court of Wards | ... 87·8 |

The following figures show the extent to which decretal amounts due to Goverment have been realised in 1894-95.

| | |
|---|---|
| Amount under realisation ... ... | ... 34,726 |
| Amount realised during the year ... | ... 6,034 |
| Percentage of recovery ... ... | .. 17·3 |

The net balance outstanding at the close of the year was Rs. 27,164. Since 1891-92, when the percentage of recovery was 45·25, there has been a very marked falling off in the realisation effected. The Legal Remembrancer submitted a pro-

posal to Government for appointing a special officer for the purpose of realising the arrears, and he has dwelt at some length in this report upon the necessity of adopting fresh measures.

The subjoined figures show the amount of Wards' decrees realised during the year under review :—

| | | | |
|---|---|---|---|
| Amount under realisation | ... | ... | 8,83,083 |
| Amount realised during the year | ... | ... | 1,51,139 |
| Percentage of recovery | ... | ... | 17 11 |

In the Burdwan Raj Estate, out of a balance of Rs. 2,32,222, only Rs. 68,670 were realised ; while in the Tikari Raj Estate, out of a balance of Rs. 3,18,870, only Rs. 48,758 were realised during the year. A list of 11 other estates has been given in which the realisations have been exceptionally unsatisfactory.

---

*Administration Report on the Jails of Bengal for the year* 1894. By Surgeon-Lieutenant-Colonel D. W. D. COMINS, Inspector-General of Jails, Bengal. Calcutta : Printed at the Bengal Secretariat Press. 1895.

THE chief administrative event of the year was the passing of the Prisons Act and Prisoners' Act in the Supreme Legislative Council, and the revision of the Jail Code.

The most important statistic is that which shows the number of persons sentenced to imprisonment, and admitted direct to jail, year by year. The Lieutenant-Governor observes with satisfaction, that the decrease in this figure, which began in 1893, has been maintained in 1894, and there is some reason to connect this decrease, as well as the previous increase, with the price of food grains.

Out of the 36,178 convicts admitted direct into jail during the year, 20,719, or 57·27 per cent., were Hindus, 13,702, or 37·87 per cent., Muhammadans, and 369, or 1·02 per cent., Christians. The number of juveniles under 16 years of age admitted to jail was 478, against 458 in 1893. The reformatory schools at Alipore and Hazaribagh remained full throughout the year. The total number of female convicts admitted direct to jail was 1,444, as compared with 1,510, and 1,484 in 1893 and 1892 respectively.

The number of escapes among convicts fell from 26 in 1893 to 21 in 1894. Of these, 8 were from district jails, 2 from intermediate jails, and 11 from subsidiary jails. Ten prisoners escaped from inside and 11 from outside the jails, as compared with 12 and 14, the figures for 1893.

The convict officers, of whom, on an average, 939 were male and 13 female prisoners, are reported to have been of the greatest assistance in the preservation of discipline. The new mark rules, which give effect to one of the proposals made by the Jail Committee, came into force on the 1st January 1894. The innovation made by these rules is that they reduce the

limit of sentence rendering a prisoner eligible for remission by marks, from two years to one year.

The Government is glad to notice that the system of giving relief to destitute prisoners, on release, from the Claude Martin Fund, was worked with care and success, and that 1,103 prisoners were relieved in this way from a sum of Rs. 2,500 placed at the Inspector-General's disposal. Besides this, all prisoners receive, on their release from jail, a sum graduated according to the distance of their homes, to support them on the way.

Taking together all three heads of controllable expenditure, viz., "diet," "hospital charges," and "clothing," the average cost per prisoner was Rs. 34-11-6, compared with Rs. 31-13-11 in 1893 and Rs. 33-1 in 1892.

The average daily number of prisoners sentenced to labour on working days was 15,900, as compared with 16,219 in the previous year. The net cash earnings for the year were Rs. 4,90,536, showing a very satisfactory increase over the figure for the previous year (Rs. 3,81,086). The following table compares the average earnings per prisoner sentenced to labour in central jails for the last two years :—

| | 1894. | | 1893. | |
|---|---|---|---|---|
| | Rs. | A. | Rs. | A. |
| Presidency ... ... ... | 112 | 7 | 121 | 14 |
| Buxar ... ... ... ... | 51 | 6 | 51 | 6 |
| Alipore ... ... ... ... | 40 | 2 | 32 | 5 |
| Bhagalpur ... ... ... | 24 | 5 | 21 | 10 |
| Midnapore ... ... ... | 20 | 0 | 24 | 2 |
| Rampur Boalia ... ... ... | 8 | 12 | 9 | 2 |
| Hazaribagh ... ... ... | 6 | 6 | 8 | 8 |
| Dacca ... ... ... ... | 5 | 8 | 6 | 5 |

The ordinary profit in the Alipore jail rose from Rs. 58,051 to Rs. 69,759, while the aggregate value of articles supplied to other departments rose from Rs. 1,01,820 to Rs. 1,30,751. The decrease in the value of the work done in the Presidency jail, in the Press Department, which fell from Rs. 1,56,921 in 1893 to Rs. 1,39,310 in 1894, is ascribed to a smaller daily average of convicts employed, and to their general bad health.

The daily average number of sick among prisoners of all classes rose from 642 in 1893 to 744 in 1894, while the proportionate number of admissions to hospital rose from 1,046 to 1,234. It is, however, pleasing to note that a remarkable improvement has occurred during the first four months of the present year.

The Inspector-General was absent from head-quarters on inspection and committee duty for 141 days in the year, and inspected 32 central and district jails and 10 subsidiary jails.

Sir Charles Elliott desires, in conclusion, to record his high appreciation of Dr. Comins' services. His report is able and full, and testifies to the special care which he has devoted to all matters concerning the health of the prisoners and the preservation of their lives.

*Report on the Excise Administration of the North-Western Provinces & Oudh for the year ending 30th September, 1894.* Allahabad: North-Western Provinces and Oudh Government Press, 1895.

THE total receipts from all sources* exceeded those of the previous year by 5·3 per cent. and are the highest on record. The total charges at the same time fell from Rs. 1,91,801 to Rs. 1,33,507; but this was almost entirely due to the cessation of payment of discount on the sale of opium. The fact that the total excise income for the year is the highest on record is the more satisfactory, inasmuch as, in recent years, all the changes effected have been in the direction of discouragement of intoxicants. The revenue from Chandu shops has been abandoned, the taxation of spirits has been increased, the excise on opium has been raised, and the number of shops for the sale of spirits and drugs, has been carefully restricted in accordance with the requirements of the population.

| | 1893-94. Rs. | *Increase or decrease, as compared with* 1892-93. Rs. |
|---|---|---|
| Country liquor .. | 38,50,765 | + 2,81,171 |
| English ,, ... | 3,62,777 | − 1,293 |
| Drugs ... | 7,57,938 | + 50,216 |
| Opium ... | 7 99,097 | − 8,590 |
| Madak and Chandu | ... | − 9,426 |
| Tári ... | 89,246 | + 1,790 |
| Fines and Miscellaneous .. | 1,820 | − 713 |
| Total .. | 58,57,663 | + 3,13,155 |

Of the considerable rise of Rs. 3,13,155 in the receipts, no less than Rs 3,10,433 belongs to the North-Western Provinces. The noxious preparations known as madak and chandu finally disappear from the provincial returns, and it is hoped that in the next generation their consumption in private will be to a great extent discontinued. The only other decrease of importance—that under the head of opium—would not occur if a sum of Rs. 77,809, charged to the Government on account of discount on sales and abatements (items which no longer appear in the accounts), were deducted from the receipts of 1892-93.

The subject of the future administration of, and the imposition of a duty on, hemp drugs is now under consideration, the report of the Hemp Drugs Commission having been recently received. If it be found possible to impose an import duty on charas, and in this way to enhance its price, this will no doubt tend to lower the advantage at present possessed by drugs over spirits as a comparatively cheap intoxicant.

Opium is undoubtedly the most unsatisfactory subject dealt with in the report. Of the small decrease of Rs. 8,590 in the real receipts from opium, Rs. 3,639 was under license fees, chiefly in the eastern districts, and Rs. 4,951 under price of opium, also to a great extent in the eastern districts. At the same time the sale of licit opium was smaller than usual, *viz.*, 65,100 sérs, as compared with 70,654 in 1892-93.

# CRITICAL NOTICES.

## General Literature.

We have been favoured with the following nine volumes of Macmillan's Colonial Library, in buff coloured paper covers, uniform in size. The clear type, neat get up, and portable size of these attractive books, tempt the reader to take them up. The following are their titles, and we purpose rapidly glancing at each :—

*Two in the Bush*, by F. Frankfort Moore ; *Peter Steele the Cricketer*, by H. G. Hutchinson ; *The Burden of a Woman*, by Richard Pryce ; *Thirteen Doctors*, by Mrs. J. K. Spender ; *Alice Lauder*, by Mrs. J. Glenny Wilson ; *Under God's Sky*, by the author of "A High Little World ;" *The Martyred Fool*, by David C. Murray ; *Neighbours of Ours*, by H. W. Nevinson ; *By Order of the Brotherhood*, by Le Voleur.

*Two in the Bush and Other Elsewhere.* By F. Frankfort Moore.

The scenes of these tales lie scattered in different parts of the world : In Australia, on the Continent of Europe, on the high seas, and in a country hotel in England. The one entitled "Under Royal Patronage" has a touch of the historical, and is deeply interesting. The others are amusing in their way, or pathetic, as the case may be ; but do not come up to the first-mentioned.

---

*Peter Steele, the Cricketer.* By H. G. Hutchinson.

To those who love cricket, this well written little work will prove full of interest and excitement. Peter Steele himself is a fine character, though not intellectually bright ; and his experience in love, lends a charm to the book. It is a pleasant novel, without any thing very sensational about it.

---

*The Burden of a Woman.* By Richard Pryce.

This is a fine specimen of a modern novel, without some o its drawbacks.

It possesses a profoundly human interest, without being sensational. The interest is due to character, and not to mere passion. It evinces a subtle yet sound discrimination of motives, and a deep insight into human nature. It occupies a sort of middle position between "Tess of the D'Urbervilles"

and "The Heavenly Twins." Mary Redwing inspires a deeper interest than Tess. They belong to the same class, being both in humble life; but Mary has a refinement not possessed by many in a higher station of society. Her life since she came to Maen Gorsedd, the Welsh village, which is, the scene of the story, had been a quiet and a settled life, and her gentle manners and kindly disposition had secured the general esteem of all who came into contact with her. The rare loveliness and grace of her daughter, a girl of ten years of age, awoke the suspicion in some minds that she had had "a past." Her peaceful look had "the calmness (so a stranger thought) that in nature succeeds a tempest." Her comeliness and personal attractions took captive the heart of a handsome young farmer who was, however, of puritanical principles, never forgiving a woman who had once fallen. This strictness of his led to his refusing to re-employ a female servant who had been seduced from the path of rectitude, but who, after the death of her infant, earnestly sought another chance of acting well. In spite of the entreaties of his sister, Peter Davidson refused to receive her into his service. The consequence was that she drowned herself. Her dead body was recovered by Peter and his sister, who gave notice to her grandmother. This old woman's sorrow and her chastened wrath, are powerfully sketched; Mr. Pryce being particularly successful in depicting human nature in periods of calamity. The following is the grandmother's imprecation against the young farmer: "It is you, Peter Davidson, is it?" she said in a trembling voice. "You as drove my Jenny to her death—Jenny, the gentlest and best creature that ever was led astray from the paths of right. You refused her another chance. It is such men as you as drive poor girls to the towns. I'm an old woman, and they do say that there's weight in words spoken from the edge of the grave. Ah, I don't want to curse you, but hark to this: May God, who says 'Vengeance is Mine,' deal with you. May suffering come to you through the sin of a woman, till your hard heart is softened, and you can learn to forgive."

This was fulfilled, but tardily, and in ways scarcely to be anticipated. Peter was enamoured of Mary Redwing and pressed his suit upon her. But she, though reciprocating his affection, steadily refused to marry him. And here comes out the finest part of her character, and her superiority to Tess. He was bent on having her reason, and when one reason after another suggested by him, was negatived by her, she told him the real reason, which sent him away appalled, but unchanged in his regard for her. Vain, however, was it for him to keep Mary's secret. She had a foe in a rival named

Hannah Rees, who, from the fact of Peggy's father having worn a wig—which she came to learn by an accident—, came to the conclusion that he had been a lawyer, and boldly assumed that he could not have been Mary's lawful husband, "as gentlemen do not marry dressmakers." On this assumption she charged Mary with having been a mother without being a wife. The simple truthfulness of Mary prevented her offering any denial. On which Hannah charged her with having passed for eight years in their village as an honest woman which she was not, and rated at her in a style which malice and jealousy, under the garb of righteous indignation alone can equal. But she was annoyed to learn from Mary that she had refused an offer of marriage from Peter, whom she had faithfully informed of her past history. The story was spread by Hannah in the village ; but so high was the esteem in which Mary was held, that it alienated very few of her friends. Peter, after an absence of two or three months, again visited Mary and repeated his proposal of marriage. Yet he held to his view that he had been right in not forgiving Jenny. On this Mary again refused him, and that so decidedly and repeatedly, that he went off, and, meeting Hannah, whose feelings were strongly excited towards him, proposed for her and was at once accepted.

The unhappy effects of the marriage, the catastrophe which resulted from it to both, and the tragic death of his wife, are pourtrayed with the art which hides itself behind the naturalness of the effect. The interest of the story is sustained to the close, but not before Peter is convinced in his inmost soul, that the unfallen but passionate Hannah was less chaste than Mary Redmond, to whose care the dying Hannah committed her child and her husband.

Mr. Pryce promises to be a successful novelist of a higher type than any whose works we are reviewing in this series.

### *Thirteen Doctors.* By Mrs. J. R. Spender.

THESE tales, each by a Doctor from his own experience, are pleasant reading to while away an idle hour.

---

### *Alice Lauder.* By Mrs. J. Glenny Wilson.

UNLIKE the run of novels, this sketch terminates without the *denouement* of a marriage. Miss Lauder appears first on the scene, coming on board the mail steamer "Suez," in an Australian port bound for England. She is the daughter of a musician, and is herself gifted with "something larger than the faculty for mechanical skill." He is sending her home with a view to her being trained to be a great singer. On board

she happens to interest a young Englishman of good position and prospects returning from Australia, who finds out and helps to bring into play her musical gifts, but whose mind is revolted at the idea of her appearing in public for money, and he strives to dissuade her from her purpose. So earnest is he in this, that, every effort failing to induce her to give up the idea of becoming a great singer or a great actress, to make a living, he says—"There is one way out of it, Miss Lauder. Give it up and take me instead."

The way in which this offer is regarded is described by Mrs. Wilson in terms which give a fair specimen of her insight into nature and her descriptive power :—

> It came to her "with a sudden thrill of joy and pain." . . . . . Childish and inexperienced as she was in many ways, she had all the quick perception of the artist-nature, when once her thought was thoroughly aroused ; and probably she read and understood all that was passing in his mind—the sudden generous impulse, the contact of old associations and influences, even the want of real passion, better than he understood himself. For more than a moment she wavered, balanced, almost yielded. He looked so manly, so kind, with something so noble in his eyes. Should she throw it over ? To him this appeared no sacrifice, but a great advantage offered to the untried and friendless girl. And she knew too well the hard side of the medal—the hard experience of cares and work and endless struggle with poverty. . . Even if she succeeded, what would that success be compared with a home and a woman's happiness ? . . . . But Love must build her house on a rock.
>
> "No, Mr. Campbell," she said, at last, very softly but decidedly, withdrawing her hand from his,—"it cannot be."

After this they do not meet for ten years, and then again in Australia. *She* has not realized her hopes of being a singer, but she is going to try again under an engagement with an old German Professor. *He* has succeeded as an Indian official and has fine prospects before him. He is rather gay and much attracted in society by a beautiful married woman. On finding Miss Lauder, however, he is drawn to her, and in due course repeats his offer of marriage, which she still refuses. This is the mere plot of the tale, but it is enlivened with characters and incidents which render it highly interesting, the scenes on the "Suez," as well as in Australia, being well described. The unusual ending of the story is rounded off with the following plaintive remark :—

> "Of these two lovers, one would never fully know what the other had sacrificed ; but perhaps their cup of love and happiness was not less blessed, because it was mingled with the ever-rising, ever-flowing, immemorial fountain of human tears."

This seems to us unnatural and hardly satisfactory.

*Under God's Sky.* By the Author of "A High Little World."

THIS is a book *sui generis.* Unlike the run of novels, it begins with a marriage, though not in high life. It was a private marriage, but the wife could not get her husband to give her a home. Thrown upon her own resources, she determined she would bring him to do her justice, no matter what time it cost her; and the interest of the work consists in a plot to effect this end, and circumvent the the dishonest scheme of her worthless partner. The central figure in the book is the daughter of an atheistic physician whom she worships. He had come of a race of puritans, whose stringent views of morality and decorum adhere to him after he had thrown off their theology, and avowed himself an atheist. He objects to low-necked dresses, and thinks waltzing indecent. His daughter, after his death, keeps steadily to his opinions, and is thrown into a society of middle class dissenters in a country town, who do not offer many inviting specimens of Christian character. A minister, however, and his wife, are afflicted by the fall of their daughter. The seducer, without altogether giving her up, takes steps to marry another young person whom the Doctor's daughter, Miss Winborne, tries in vain to divert from her purpose of accepting him. Strangely enough the efforts of the minister's daughter succeed in getting her lover to do her the only justice that remained, by marrying her. The attempts of Miss Winborne being in the same direction as those of the Rev. Mr. Dawson and his wife, she is brought into sympathy with the old people; and, believing her deceased father would have approved of her consorting with them, begins to attend their chapel—united with them in feeling, but not in opinion. She abandons, however, her father's views of the *physical* basis of life, by marrying a deformed child of genius with a gift for music. They find they have been formed for each other, and do homage to Love, whom they discover to be a great king. The book is interesting reading; but full of odd theories.

---

*The Martyred Fool.* By David Christie Murray.

WITHOUT being an admirer of the creed of Nihilists and Anarchists, Mr. Murray describes the course of an English anarchist from his boyhood in Australia to its consummation in Paris. And he unfolds with true insight, the working of the causes which made Evan Rhys an anarchist. In the first part of the book the influences are described which constituted "the sowing of the seed," and, in the second part, the effects, which he calls "the reaping of the harvest." Australian scenery is well described, as well as the surroundings in which the Welsh boy was brought up. The

emotional nature of the Celt took deep impression from the father's sufferings and experiences, and the teachings which were inculcated on him—"If efer you see a chance to hit a chentleman, hit him. You can't co wrong, my boy,—you can't co wrong."

The indomitable will of the boy was unsubdued by any amount of difficulty or danger; but his Celtic heart was much affected by the kindness of a French aristocrat, who took him up after his father's death and educated him in France. There, however, his early teaching developed itself under Nihilistic influences, and he threw himself, when grown to manhood, into the ranks of the Anarchists. The lad's own explanation of his creed may be best given in his own words to a lady who drew it out :—

> "Do you remember my father, Miss Quahar?" he asked. "He was hanged fourteen years ago for the murder of a man whom he killed by accident in self defence. That man ruined my father, as his father had ruined my grandfather. There was a feud generations long between the two families. (The relations between them in the old country had been those of landlord and tenant). The gentleman followed the labourer with curses for a mile or two, and at last would have flogged him like a dog. The law hanged the sufferer and had nothing but pity for the tyrant. Do you remember my mother? What was her crime? She tried to save her husband, and her reward was penal servitude. Do you remember my baby sister? I have seen you nurse her when you were a child. They tore my mother away from her, and she was left in that lonely shanty. No body heard her crying, nobody entered the house. She died there of starvation, the pitiable little mite. I remember these things if other people forget them. The law is one monstrous engine of cruelty and oppression. Every hour of every day, the rich are in active war against the poor. Society is built on pillage. There is no denying these things, there is no disguising them. To ask me to deny them is like asking me to swear that noon is midnight. I don't chose to sell my conscience for a thousand francs a month. So long as I have head and heart and brains, I will use them to do such work as one man can do to break up the reign of selfish wickedness."

Here is a true picture of the conscientious anarchist, whose views of the world and its oppressors have been drawn from his own very limited experience and observation. When Rhys came into the brotherhood of Nihilists, he found he was bound to carry out what they decreed. And when this came to be assassination, his better nature revolted.

The book is a masterly unravelling of the principles and plots of Nihilists. With no inexperienced hand does he pourtray character; and with no tyro's touch does he work out his own plot—the *denouement* being that Evan Rhys, in declining to become the tool of the Nihilists to assassinate an innocent nobleman, undergoes the sentence of death, but sells his life dearly—exmplifying, nevertheless, the title of the book, "The Martyred Fool."

The book is one of absorbing interest, written with considerable power and pathos.

*Neighbours of Ours.* By Henry W. Nevinson.

A SERIES of amusing sketches of characters and of stories, the scenes lying in and about East London and on the Thames. The stories contain nothing very striking or sensational; but all possess a human interest, and are pervaded by a quaint humour as original as it is enlivening. They are all told, too, in the cockney dialect, which seems adapted for droll jest and funny remark.

*By Order of the Brotherhood.* A story of Russian Intrigue. By Le Voleur.

THIS is a work of thrilling incidents, in which the interest is sufficiently well sustained. The *Brotherhood* means, of course, a society of Nihilists, who attempt, and all but succeed, in inducing a young Englishman of position and fortune (already married to be drawn into their meshes, and become a cat's paw for the assassination of the Czar. He is even inveigled into a "political marriage" with a beautiful continental Duchess, herself a Nihilist. The pursuit of this victim by his solicitor and a detective, for his rescue, constitutes the interest of the story. The subjugation of the young Englishman's will is effected by hypnotism in a way that strikes one as most improbable. Beyond creating a sensation by exciting incidents and mysteries, which find easy solution at last, the book has no higher claim to notice.

*Tess of the D'Urbervilles—A pure Woman faithfully presented.* By Thomas Hardy. London: Macmillan & Co. and New York 1895.

THE sensation which this powerfully written novel, with its profoundly tragical ending, created on its first appearance, having subsided, we are perhaps in a better position to take a calmer and more correct view of its aim and its general tone. Mr. Hardy's own descriptive title of his book was—"A pure woman faithfully presented," notwithstanding that her career began "after an event in her experience which has usually been treated as extinguishing" one of her sex. In his preface to the 5th and later editions, Mr. Hardy recognises the responsive spirit in which *Tess of the D'Urbervilles* was received, and expresses his conviction that he was not altogether wrong in having proceeded "on the lines of tacit opinion," instead of merely conforming

to what he calls "the local formulæ of society." Merely conventional morality, often as loud in its pretensions as it is hollow and hypocritical in its essence, has to be shocked—and to be rudely shocked—,in order to afford fair play to those whom it victimises. But a new spirit has arisen of late years—a spirit which, without toleration of impurity, is willing to afford a chance to the fallen to rally and retrieve their position. And although, unfortunately, the "tender mercies of the good" are exemplified with the most marked emphasis and the most disastrous results, in the person of Mr. Hardy's hero, Angel Clare, whose cold and cruel treatment of Tess led to the closing catastrophe, it is nevertheless true that the voice of compassion :—

> "Poor wounded name! My bosom as a bed
> Shall lodge thee."

is that of the male sex The "new woman" has no such bowels for the other sex, much less for her own. Mr. Hardy's book sets out in high relief the remedial and restorative spirit which is of the very core of Christianity, in contrast to the self-righteous and pharisaical temper which will not allow a *locus penitentiæ* to any member of the soft sex who has once erred from the strict path.

Yet, while immeasurably more Christian in spirit in this respect, than the pretentious airs of such books as "The Heavenly Twins," *Tess of the D'Urbervilles* abounds with reckless inuendoes, senseless sneers, and purposeless strictures upon things as they appear to be, as if the world were really a chaos and not a cosmos.

That kind of thing had better be left to Sara Grand and her immaculate sisterhood, who fail to see purity in man or wisdom in God.

*Essay on the Common Features which appear in all Forms of Religious Belief.* By Robert Needham Cust, L.L.D., Barrister-at-Law, Honorary Secretary of the Royal Asiatic Society, Late Member of Her Majesty's Indian Civil Service. London: Luzac & Co., 46, Great Russell Street. 1895.

THE title of this book affords scarcely an adequate idea of the wide range of topics which it embraces. To give our readers some notion of its nature, we shall quote from the "exordium" which precedes it. After describing an old gentleman of 70 years, who had been through the whole circle of the sciences, had dropped his plummet into the deepest well, and had found no bottom, it says: "There he sat at last, like a statue of Armed Science waiting for more

light: no scoffing, no blasphemous word had ever passed his lips: he had thought kindly, even pityingly, of all, deeming them to be blind, or to be walking with intentionally closed eyes. He knew from experience what an exacting mistress Science was, and how easy it was to be deceived, and he extended to the vagaries of others the same large-hearted charity which he gently, but not obtrusively, claimed for his own.

* * * *

"In the last few years many things had occupied his thoughts. A transition period had arrived in religious affairs; old bulwarks had been swept away. The inhabitants of the most distant regions of the world had begun to know each other. The spade of the excavator was exposing to view treasures never dreamt of in the shape of the documents of the past. New worlds of science were opening round young intellects, to which Science was the necessity of life." He passed then under review:

I. The Geographical, Ethnical and Linguistic Revelations.
II. The larger view of Historical Research.
III. The Comparative Study of the Religions of the World.
IV. The Excavations in Egypt, Mesopotamia, Syria and India.
V. The higher criticism of the Old Testament.
VI The fearless, methodical, scientific spirit of inquiry in every portion of the great Kosmos.
VII. A deep and moral consciousness of the relation of the Creator to all His poor creatures from the beginning of the ages until the present epoch.

After reading the history of the ancient nations, he did not, we are told, agree with the bold assertions of his own countrymen as to the spiritual position of the mass of mankind.

I. That they had in "countless generations and untold millions been born, lived and died without the opportunity of finding the truth, in a matter deemed by themselves to be most essential to their welfare."
II. "That to one portion of the great world alone, and for a few centuries out of the great succession of years, the truth was believed to have been revealed."
III. "That, although for many centuries great nations in Asia had laboured hard in the search for Divine Truth," their stored-up knowledge was

nothing worth, and they themselves were like the beasts that perish—" seemed very strange."

From the notes of many years, cuttings and extracts from books, classic and otherwise, and the wealth of a well-stored memory, the old gentleman completed these pages; but did not live to carry them through the press. This was left to another hand.

We have taken up some space in giving the pith of the exordium, as it really seems to give in epitome the substance of this work. The topics, however, seem to us too numerous to be dealt with successfully by a single person, however learned, and though the work is instinct with life and intelligence, and shows extensive reading and large culture, many of its conclusions, seem hasty. Yet the book is rich in suggestiveness and broad in its views. It teems with extracts from authors of every age and country, and proves the writer to be a man of wide sympathies who, while recognizing truth wherever it appears, has the courage to say: " Far be it from me to say, or imply, one word against the truth, the reality of the Christian religion of the nineteeth century: without it, life would be poor indeed:

Nevertheless, it is strenuously denied that any one nation had a monopoly of Divine truth. The writer finds in the religions and religious writings of all nations, the germ of most Christian truths, or, at least, the development of the following ideas from their dawn to their present aspect. A supernatural power is found to be believed in by all races, and the successful development of the belief is traced through the ages until " The fatherhood of God " is reached. The same historical method is attemped with " The worship of such a power," and " The manifestation of such a power." The remaining chapters deal with early human practices and notions, " Records of past generations," " Religiosity and Morals," and " The Progress of the Human Race."

In a word, from extracts from writers of every country, Greece, Rome, Babylon, Assyria, Egypt, Persia and China, and from a review of the cult of all countries, it is attempted to show that the " Light which lighteth every man " has shone everywhere, that progressive development may be traced in all religions, and that the Almighty did not confine his regards to one nation, but extended them over all. " The fact seems to be, that the Great Father imparted to all His poor children a religious instinct, and a religious faculty capable of development according to their physical environment, and metaphysical opportunities."

This is the key-note of the book. But we utterly despair of being able to afford our renders an adequate idea of the

varied interest, the stimulating effect, and the prodigal wealth of the citations from writings sacred and profane of all ages and countries. The writer comments freely as he goes along, and, as on the subject of contradictory and absurd prayers, castigates his own countrymen and co-religionists far more severely than any others.

*The Diseases of the Will.* By Th. Ribot. (*The Religion of Science Library.*) Chicago, the Open Court Publishing Company. 1894.

PROFESSOR RIBOT'S "Diseases of the Will" is marked, in an eminent degree, by the perspicuity and the strict adherence to the positive method which characterise all his works.

The fundamental principle on which his psychology of the will is based, is the established physiological truth, that every state of consciousness has a tendency to express itself in movement, in action—this principle being merely a particular case of the more general law, that "the reflex is the sole type of all neural action, of all relational life." The activity of the new-born child consists in a profusion of purely reflex movements, destined, in time, to be in great part suppressed by inhibition depending on gradual education. This diffused reflex action, grounded in anatomical relations, is the simplest manifestation of the transformation of excitement, or "irritation," into movement. Though accompanied, in a greater or less degree, by rudimentary consciousness, it is wholly involuntary, and expresses the activity of the species, organised and fixed, through a long succession of generations, by heredity. Desire, which primarily tends to satisfy itself immediately, is and intermediate stage between the purely reflex and the voluntary condition, exhibiting, physiologically, no difference from reflex movements of a complex kind, and differing from such movements, psychologically only, by the state of consciousness, more or less intense, by which it is accompanied. This form of activity is augmented when the will grows weak, and persists after its disappearance. Not until intellect has arisen, through accumulation of experiences, does truly voluntary, or ideo-motor, activity arise. It is not, however, the idea, as a state of consciousness, but the complex physiological state which it connotes, that produces movement. "The relation is not between a psychical event and a movement, but between two states of the same kind—between two physiological states, two groups of nervous elements, one sensory and the other motor." Voluntary activity, again, may be regarded as a stage intermediate between desire and the

abstract idea, where the tendency to action is at a minimum. It might, at first sight, appear that the fact that voluntary movements are adapted, or in other words, teleological, distinguished them from other movements. But this is really a characteristic which they possess in common with most physiological movements. The difference is in degree only.

Into the vexed question of free will, the author does not expressly enter ; but the answer to it is, none the less, implicitly given in his conclusions. The problem of liberty, he points out, reduces itself to the question whether one can go outside the chain of effects and causes, so as to posit an absolute beginning. And, discussing the nature of choice, he says : "In the vegetable kingdom, I will simply recall that the insectivorous plants, like the *Dionœa* (Venus's fly-trap), select certain bodies which come into contact with them, to the exclusion of others. The amœba chooses, in the same way, certain organic fragments, with which it nourishes itself. These facts are incontestable, but their interpretation is difficult. They are explained, in general, by a relation of molecular composition between what chooses and what is chosen. Without doubt, choice is here exercised in a very limited field ; but it is also no more than its rudest form, almost physical. By the origin and development of a more and more complex nervous system, this blind affinity is developed into a conscious tendency, then into several contradictory tendencies, one of which prevails—that which represents the maximum of affinity. . . . . But in all cases *choice expresses the nature of the individual at a given moment, under given circumstances, and in a given degree ;* that is to say, the more feeble the affinity, the less marked is the preference. Hence we are able to say that choice, let it result from a single tendency, from several tendencies, from a present sensation, from images recalled, from complex ideas, or from complicated calculations reaching out into futurity, is always founded on an affinity, an analogy of nature, an adaptation."

But Professor Ribot's point of view will be best understood from his general conclusion : "Volition is a final state of consciousness which results from the more or less complex co-ordination of a group of states, conscious, sub-conscious, or unconscious (purely physiological), which, all united, express themselves by action or inhibition. The principal factor in the co-ordination is the character, which is only the psychic expression of an individual organism. It is the character which gives to the co-ordination its unity—not the abstract unity of a mathematical point, but the concrete unity of a consensus. The act by which this co-ordination is made and affirmed is choice, founded on an affinity of nature. The volition . . . . is then for us only a simple state of consciousness. . . . .

Furthermore, *it is not the cause of anything.* The acts and movements which follow it, result directly from the tendencies, feelings, images and ideas which have become co-ordinated in the form of a choice. It is from this group " (in its physiological aspect) " that all the efficacy comes. In other terms—and to leave no ambiguity,—the psycho-physiological labour of deliberation results, on the one hand, in a state of consciousness, the volition, and on the other, in a set of movements or inhibitions. *The 'I will' testifies to a condition, but does not produce it.*"

Of the author's treatment of the special subject of the book, Diseases of the Will, we have so far said nothing. On this head we have space only to note that he divides such diseases into two great classes, according as the will is impaired, or extinguished. The impairments of the will he again divides into two groups : Impairment by defect of impulse, and impairment by excess of impulse. Impairments of the voluntary attention, though merely a particular case of will-impairment, are, owing to their importance, examined separately; and, under the title of "The Realm of Caprices," a study is given of a peculiar state in which the will never succeeds in forming itself, or does so only accidentally.

The translator, Merwin Marie Snell, has, it may be added, done her work admirably.

*Central Provinces in the Viceroy's Legislative Council, Calcutta Sessions, 1893-94, 1894-95.* Printed at the Reliance Press, Calcutta.

*Reply of the Honourable Mr. Gangadhur Rao Madhav Chitnavis, C. I. E., to an Address presented to him by the people of Nagpur, on the 21st July 1895.* Printed at the Albert Press, Nagpore.

THE first of these pamphlets contains the speeches delivered by the Hon. Mr. Gangadhur Rao Madhav Chitnavis, C. I. E., together with the questions put by him, and the replies given to them, in the Viceroy's Council, during the past two Sessions in Calcutta, and also his Minute on the Cotton Duties Bill, thus enabling the public to judge, at a glance, of the excellent work done by him as a member of the Legislature. The title of the second pamphlet sufficiently describes its contents. Mr. Chitnavis' speeches are distinguished by thoroughness of local knowledge, and by a combination of out-spokenness with moderation. His Minute on the Cotton Duties Bill is a specially valuable document.

The first pamphlet would have been much improved by an index.

*Govindadáser Karachá*—Edited by JAYA GOPAL GOSVAMI. First edition, Calcutta. Printed at the Metcalfe Press, No. 1, Gour Mohon Mukerjee's Street, Calcutta. Published at the Sanskrit Press Depository, 20, Cornwallis Street, Calcutta. Saka 1817. Price 12 annas.

THIS is a work written in the year 1430 of the Saka era, that is 1508 A. D. Therefore it must be one of the most ancient works in Bengali literature. It is written by one who was not burdened with much scholastic knowledge. The author was a blacksmith by birth and profession, belonging to Kánchannagar in Burdwan, which was famous, from remote antiquity, for the excellence of its works in metals The cutlery and bell-metal plates of Kánchannagar are still well known. The author quarrelled with his wife and renounced the world at an early age. He became a follower of Chaitanya, and had a rare opportunity of visiting different parts of India, as the personal attendant of that celebrated reformer. He accompanied him throughout his tour in Southern India, and in this work he gives an account of all that he heard and saw during the tour. The statements made are in a simple and straightforward style, and are concerned more with different articles of food in different countries, than with anything else. The author does not conceal the fact that he had a taste for good-eating, and that he could eat much. As it is not written by a scholar, it gives a faithful picture of the manners and customs of the countries visited. He describes things as he sees them, and does not care to create a beau-ideal.

In the year 1508 nearly the whole coast from Bálessor to the mouth of Indus was in the hands of the Hindus, almost in an unbroken line, and Chaitanya, in his travels, seems to have followed the coast line from Puri to Dwárká, and then returned to Puri by crossing the whole continent. Much valuable historical information can be gleaned from this book. For instance, the author describes Puná, long before it became the capital of the Márhattá Empire, as a great seat of Sanskrit learning, where students flocked from different parts of India for the study of various shastras, and shows us that the Gita and Bhágabat were regarded even then at Puná as the common property of Bráhmans at the place. Túnnu, one of the learned men of Puná at the time, became a great friend of Chaitanya and gave him minute informaion about the places to be visited in Sahyádri and in the Konkan, which became so famous, a century and a half later, as the scene of Sivaji's military adventures.

The beauty and grandeur of the Sahyádri are graphically described

A curious custom is recorded of dedicating girls to Khándavá, a deity who had a temple in the city of Jijuri. Any poor man who could not marry his daughter brought her to Jijuri and married her to the god. Thus a very large number of girls gathered together round the temple, where they lived by prostitution. These girls were known by their common name Murári. They lived a very miserable life, and the pilgrims who came there, were often despoiled by them. Chaitanya is said to have inspired the Muráris with a spirit of religious enthusiasm, and induced them to lead a higher life. Jijuri is perhaps Gingirá, the capital of an Abyssinian principality to the north of Goá, which Sivaji, with all his energy and military skill, could not take

There are two very touching stories in this book, of the conversion of old veteran dacoits to Vaishnavism by Chaitanya. One was Nároji, a Bráhman, and the other was Pánth, a Bhil. Nároji and his followers infested the forests of the Konkan, and Pánth-Bhill those in the Drúbira country. Both became Vaishnavs, both renounced the world, and both were sincere penitents. Nároji followed Chaitanya in his travels and died in his presence in Gujerát. Ahmedábád, the capital of the Mahommedan kingdom of Gujerát, is described as a great city, surrounded on all sides by gardens and summer houses of the wealthy citizens. আশ্চর্য্য আমেদাবাদ জাঁকের সহর। কতই উদ্যান কত গৃহ মনোহর Chaitanya passed the first night at Ahmedábád in one of these gardens called Nandini. The meeting of Chaitanya and Rámánanda of Kulingrám accidentally, in the forest beyond Ahmedábád, is described in the work in touching terms. Rámánanda belonged to one of the great Vaishnab families of Bengal, his grandfather, having translated portions of the Srimadbhágabat into Bengali verse in the year 1470. The pilgrims to Jagnannáth used to resort to Kulingrám and receive from their family a dory, or band, which ensured their safety for the rest of their journey. This gave the family great influence in the country, and their descendants are still regarded as highly respectable Kulin-Káyasthas of Bengal.

From Ahmedábád the pilgrims proceeded to Somanáth. The ruins of which place are described with some power.

ঢিবিঢাবা ভাঙ্গা চিহ্ন আছে সেইখানে।
দেখিয়া আঘাত বড় লাগিল পরাণে॥
মন্দির বাড়ীর শোভা গিয়াছে চলিয়া।
ইহা দেখি প্রভুমোর আকুল কাঁদিয়া॥

The destruction of the temple of Somanáth by Máhmud of Ghazni is well known. But the temple was rebuilt by Bhim, a Chálukya King of Gujerát, and it again became a resort of thousands of pilgrims. But Mozaffer I, the founder of the Mozaffer Sháhi dynasty of Gujerát, who was a tool in the hands of the Mullás from Bokhárá, and who conquered the province from Farhat-ul-Mulk, who was strengthening his position by ingratiating himself with the Hindus by building Hindu temples, again destroyed the temple, about the year 1400, and it was not rebuilt as long as the family continued in power. Chaitanya went there in 1509, during the reign of Máhmud Sháh Begárá, who was a fierce persecutor of the Hindus, and who destroyed the last stronghold of Hindu independence in Gujerát by the conquest of Champánagar and Junagar. The modern temple of Somanáth was built during the tolerant reigns of the Mughal Emperors.

We must thank Pundit Jaya Gopal Gosvámi for bringing out this unknown relic of ancient Bengali literature. It reveals a stratum of Hindu history which, though not very ancient, is still very interesting. It would be interesting to Hindu readers if all the places mentioned in the work were mapped out and identified. That would show not only the route which Chaitanya took, but also the various degrees of political and other influence which the Hindus possessed in various parts of the country. For instance, on his return journey from Dvárká to Puri, two extremities of the continent, Chaitanya passed through the vast forests of Gandoáná, and he was present at the cities of Amjhorá, Mándálá, Deoghur, Chandipur, Rájpur, Vidyánagar, Ratnapur, Sarnagar, Sambalpur, Dáspál, and other places, which had not yet been, and many never were, conquered by the Mussalmans. Mandala, Garamandala, was the capital of a Gond chief who intermarried with Rajputs of high families. Dalapati married the chief of Mándálá, Durgávati the daughter of the last Chandel King Kirti Sinha of Kálanjara, and Durgávati distinguished herself by her warfare against the generals of Akbár. The Rájas of Ratanpur traced their descent from Chedes, so famous in the Mahábhárat, and they always defied the Muhammadans from their jungle fastnesses.

*Bráhmachári*—Printed by N. C. Bose & Co., 7, Bhim Ghose's Lane, Great Eden Press, Calcutta. Published by Shri Kali Ghosh, at 7, Umesh Chandra Dutta's Lane, Calcutta. Price 8 annas.

POETICAL Miscellanies are the order of the day. Every young literary pretenders writes verses by way of exercise, and then puts them together and hurls them at the heads of a devoted public. These Miscellanies are insipid, dull and

worthless. It is a pleasure to turn from such worthless publications to a small poem written with care, power and spirit. There is much genuine poetry in the work entitled Brahmachári which is before us. Though the moral of the story cannot be approved, the language is polished like a mirror, and the style flowing, elegant and full of pathos. The descriptions are pure, elevating and charming. It is a poem on disappointed love, and has the ring of Bhababhuti's purity, along with forceful delineations of the emotions of human heart. The story is very simple. A well-to-do Bráhman was married at an early age to a girl of perverse and wicked disposition. He had everything that can make a man happy—wealth, power, and learning. He had houses, gardens and temples situated in a most lovely country, intercepted by beautiful streams and adorned and beautified by art. He had more than this. He had a heart to appreciate and enjoy the beauty of nature in the midst of which he lived. His wife was, perhaps, the only thorn in his side, but he never grudged and never complained of it. He kept his sorrow to himself. At last he came across a charmingly modest girl, a child-widow devoted to religious and pious exercises. She made a deep impression on his mind, but her whereabouts was not known to him. Her visits to his temples were, like those of an angel, few and far between, and when she came to know that he sighed for her, she avoided him. This simply maddened the poor man, and, like Manfred, he determined to throw himself from the terrace of a lofty palace into the black waters of a mysterious tank below. He had just given the jump when he was saved, not, like Manfred, by a shepherd, but by the lady who was next to his heart. He cried for her, but she disappeared in the mysterious forest which surrounded the palace and the tank. He now began his search for her in earnest. But all his efforts were vain. With a heavy heart he was returning to one of his far off gardens in a boat, rowing along one of those beautiful streams which make country life in Bengal so enjoyable. He was overtaken by a storm that upset not only his boat, but another coming from the opposite direction. He struggled on in the water, but he found another sinking. His generous disposition induced him to save that other at all risk. But in the struggle both were exhausted, and when they gained land, they were insensible. Coming to his senses, he found that he had saved the life of no one else but the lady whom he loved so much. She dies a short time after confessing her love for him. Immediately after her death, his wife appears on the scene and insults the dead body. He, however, performs the last rites of his lady-love, and, covered with her ashes, renounces the world.

This is the short story embodied in the book. It is pathetic

from the beginning to the end, and the author's simple and elegant style has given it a quiet charm which a more ambitious work always lacks. We cannot help quoting a specimen of the style :

না জানি সেরূপ আমি বুঝাব কেমনে
কিবা অলঙ্কার কিবা বাক্যের বচনে।
কভু না দেখেছ যাহা কভু না দেখিবে,
ত্রিসংসার মাঝে আর কভু না শুনিবে।
দেখেছ সুধাংশু শোভা শারদ গগনে,
সন্ধ্যার কোমল রাগ দেখেছ নয়নে,
দেখেছ সরসী বারি শীতল নির্ম্মল,
তা হে চন্দ্র কর মাখা হিল্লোল সকল,
সেবিয়াছ গ্রীষ্ম ঋতু শীতল পবন,
শুনেছ নিশীথ কালে মধুর গায়ন,
তাহার বদন হাসি অমৃত বচন,
নারিবে বুঝিতে তবু অখিল কেমন !

---

*Bangasáhitye-Bankim*—By Háran Chandra Rakshit. Printed by Kabal Ram Chattopadhya at the Bangabási Steam Machine Press, 34-1, Collootolla Street, Calcutta, and published by Bipin Behary Rakshit, 24-Perghanas, Majilpur. Price 4 annas.

THIS is a successful prize-essay on the subject of the position of the late Babu Bankim Chandra Chatterjee in Bengali literature, written by Babu Háran Chandra Rakshit, a rising young Bengali author. Babu Háran Chandra has a great command of the Bengali language. His language rises and falls with his sentiments and the cadence produces a great effect. He is a novelist himself. He has produced one character, at least that of the wicked Tribakra, which is strikingly original; and thus what a young aspirant after literary fame has to say about an old veteran of his own trade, especially at the excited moment immediately following his death, deserves a hearing. Babu Háran Chandra gives the very highest position, that of *Rájrájeswar*, to his hero, and attempts to prove this by arguments and by quotations. In one place he says that the depth of feeling and the literary finish of George Elliot, the penetration and experience of human character of Victor Hugo, the deep and touching humour of Dickens, and the plot interest of Scott, all of these combined make Bankim Chandra's novels, so charming. In another passage he says that if Bankim's novels be translated into various languages, he will be regarded not only

as the best poet of Bengal, but as one of the best novelists of the world. All this is high and enthusiastic praise, quite in consonance with the character of a young literary enthusiast. But the sober estimate he has given of the character and writings of Babu Bankim Chandra will, perhaps, be accepted by all. Babu Bankim Chandra had a master-hand in delineating idealistic characters, and his language was brilliant and charming. He wrote not only novels, but articles and essays on a variety of subjects, and though he was not often very deep, he was always brilliant. Clearness and perspicuity, he used to say, should be the aim of every one who intended to be a good writer, and he himself added brilliancy to these qualities. That he devoted his whole life to the improvement of Bengal literature, there can be no doubt; that he will occupy the first position in that literature for a long time, is certain. The public should be greatly indebted to Babu Háran Chandra Rakshit for his eloquent essay, which, though from the nature of the case, it is not very deep, is brilliant.

---

*Barnásram Samáchár, Pratham Khanda, pratham Bhág*,—By Pundit Madhu Sudan Shiritiratna: Bhatpárá. Printed by Rakhal Chandra Bhattacharjya, and published by Preo Brata Chackravarti, 29-30, Sib Narayan Das's Lane, Calcutta. Price 12 annas.

THIS purposes to be the first of a series intended to explain the duties of a good Hindu. The late lamented Babu Bhudev Mukherji left his work on this subject unfinished owing to his death, and it is a matter of congratulation that Pundit Madhu Sudan Shiritiratna, one of the most distinguished professors of Hindu law and ritual, has undertaken to give to his co-religionists a full and complete work on the subject. No one is better qualified for the task than the Pundit, whether for his proficiency in Hindu lore, for the sobriety of his judgment, or for the modesty which distinguishes his character.

The first part of the proposed series deals with the morning duties of the Hindus. While the civilized nations of Europe aim at cleanliness and method, the Hindus aim at *suchita* or purity, and mental peace. The word *suchita* means something more than cleanliness, it is cleanliness plus something else. It includes cleanliness both of the body and of the mind. In the morning the Hindus are enjoined to cleanse their person, their household and their surroundings, that there may be left nothing in these to produce a feeling of loathing. With the physical surroundings so thoroughly cleansed, they should try to fix their mind on spiritual subjects—in the worship of gods and in the meditation of things trans-

cendental with a view to purge out, as it were, all unclean thoughts from their mind, and, after thus purifying both their body and mind, they are enjoined to enter upon the ordinary duties of life, namely—study, meditation, acquirement of livelihood and relieving the distress of men and animals, as well as political, social, commercial and other avocations of life. How to acquire this physical, or mental, *suchita*, or purity, exercised the minds of a very large number of Hindu thinkers, and a much larger number of books has been written on this than, we believe, on any other subject in Sanskrit, and minute rules have been laid down for such ordinary duties as the cleansing of the teeth, the washing of the face and feet and so on.

People who have received an English education often consider these minute regulations childish, if not foolish, and many of them have altogether discarded them. The most striking difference between educated and non-educated Hindus is the observance or non-observance of these regulations. One party rails at the other as wasting their time in trifling matters, and they are, in their turn, regarded as dirty, unclean and impure. But one thing may be said in favor of these regulations, that they are the accumulated experience of ages and well suited for the acquisition of the Hindu aim of life, namely—purity and mental peace. The point lies, not in the observance and non-observance of these rules, but in the discarding or non-discarding of the Hindu aim of life.

This work goes deep into the subject, as may be expected, from so learned a writer. It is clear and intelligible throughout though the Bengali in some instances descends to slang, and in some instances, the educated classes are rather harshly dealt with.

*Sri-Nabadvip-Tattwa.* Printed and published at the Sabitri Press, Hugli. By Hari Das Pal.

THIS is a short work on some points in connection with the antiquities of Nabadvip, the last Hindu capital of Bengal. A number of educated Bengalis have become the followers of Chaitanya, and they have fixed on a point near the junction of the rivers Kharia and Ganges, now known as Meyápur, as the Máyápur where Chaitanya was born. But the anonymous author of this work contradicts them and says that Meyapur is a corruption of the word Minyapur, the quarter inhabited by the Minyas, that is the Musulmans, and his arguments seem to be plausible, owing to the vicinity of Meyápur to the ancient Kajipara, where the Musulman judicial officer used to live. The river on which Nabadvip stood has changed its beds so many times, that it is impossible to identify any place in

that great city, and it is a pity that no attempt has yet been made by the Archæological Department to explore so important a place. In the absence of all information on the subject, we refrain from pronouncing any opinion regarding this identification. We only draw the attention of the public to two passages in Gobinda Dass Karchá:

সবদিন চলিয়া আইনু মাঠে ঘাটে।
প্রাতে গঙ্গা পেরিয়ে আইনু নদের ঘাটে॥
নদীয়ার নীচে গঙ্গা নাম মিশ্রঘাট।
আনন্দ বাড়িল হেরে নদীয়ার পাট॥
ডাহিনে বাগ্দেবী নদী কুলু কুলু স্বরে।
সকলের আনন্দ লাগিয়া গান করে॥
শ্রীবাস অঙ্গন হয় ঘাটের উপরে।
প্রকাণ্ড এক দীঘী হয় তাহার নিয়ড়ে॥
বল্লাল রাজার বাড়ী তাহার নিকটে।
ভাঙ্গা চুরা প্রমাণ আছয়ে তার তটে॥

Travelling the whole day through fields of corn, next morning by crossing the Ganges, I came to the ghât at Nadia. Below Nadia is the Ganges. It is called Misraghât. Seeing the city of Nadia, my delight was increased. On the right, the river Baghdevi sings sweetly, to the delight of all, with the sound *kul, kul, kul.* About the ghât was the *Angana*, or courtyard, of Sribash's house. There is a large tank near it, and near it again are the ruins of the palace of Rájá Ballál. The mounds and debris proved this fact.

এত বলি সঙ্গে প্রভু চাহে লইবারে।
অমনি চলিনু মুহি প্রভুর সংসারে॥
গঙ্গার উপরে বাড়ী অতি মনোহর।
পাঁচ খানি বড় ঘর দেখিতে সুন্দর॥
নগরের দক্ষিণ সীমায় প্রভুর বাস।
হরিনামে মত্ত প্রভু সদাই উল্লাস॥
প্রকাণ্ড এক দীঘী হয় নিয়ড়ে তহার।
কেহ কেহ বলে যারে বল্লাল সাগর॥

So saying Chaitanya wanted to take me with him, since then I belonged to his household establishment. The house was on the river, delightful to look at. It contained fine, large, thatched, neat and trim huts. The lord lived at the southern boundary of the city. He lived in ecstasy, always enthusiastically engaged in pronouncing the name of Hari. There is a large tank near his house ; some call it Ballal Sagara.

*The Lonely Malincourt.* By Helen Mathers. London Macmillan and Co 1895.

*Comrades in Arms.* By Arthur Amyand. London : Macmillan and Co. 1895.

*The Salt of the Earth.* By Philip Lafargue, Author of The New Judgment of Paris.' London : Macmillan and Co. 1895.

*A Guide to Hindustani,* specially designed for the use of officers and men serving in India, including colloquial phrases and a collection of Arzis, nad English Translations. By G. S. A. Ranking, B.A., M.D., Cantab, Surg. Lieut.-Col., Indian Medical Service, Secy. to the Board of Examiners, Fort William, &c. Calcutta : Thacker, Spink and Co. 1895.

*The Care of Infants in India.* A work for mothers and nurses upon the feeding and rearing of Infants. Edited by G. Mellin. Publishers : G. Gill & Sons, 13, Warwick Lane, London, E. C. 1895.

*A Practical Hindustani Grammar,* Part I and II. Compiled by Lieut.-Col. A. O. Green, R. E., P.S.C., Author of 'A Practical Arabic Grammar,' 'Modern Arabic Stories,' etc Oxford : The Clarendon Press. 1895.

*The Metamorphosis of Silver.* By G. Eldon Manisty, I.C S. (Barrister-at-Law . Calcutta : Thacker, Spink and Co. 1895.

*The Monist.* Vol. V, No. 3, April 1895. Edited by Dr. Paul Carus. Chicago : The Open Court Publishing Company. 1895.

*The Indian Magazine and Review.* Vol. XXVI, No. 295, July 1895. Westminster : Archibald Constable and Company, 14, Parliament Street, S. W. 1895.

*The National Review.* Edited by L. J. Maxse, May 1895. Edward Arnold, Publisher to the India Office : 37, Bedford Street, Strand, London, W. C. 1895.

*The Indian Church Quarterly Review.* Vol. VIII., No. 3, July 1895. Edited by the Rev. A. Saunders Dyer, M.A., F.S.A Calcutta : 63, Ballygunge Circular Road. 1895.

*Records of the Geological Survey of India.* Vol. XXVIII, Part 3, 1895. Office of the Government of India Central Press. 1895.

*The Agricultural Ledger.* No 15 of 1893, The Ground-nut or Earth-nut ; No. 20 of 1894, The Palmyra Palm ; No. 3 of 1894, Farmyard Manure ; No. 18 of 1894, The Agave Fibre ; No. 19 of 1894, The Eri Silk ; No. 1 of 1895, Catechu or Cutch ; No. 2 of 1895, Indian Coals ; No. 3 of 1895, Crops ; No. 4 of 1895, Agricultural Improvements in the Gya District, Calcutta : Office of the Superintendent of Government Printing, India. 1894.

*Accounts relating to the Trade and Navigation of British India.* Nos. 2, 3 and 4, for the months of May, June and July 1895, and for the four months, 1st April to 31st July 1895, compared with the corresponding period of the years 1893 and 1894. Calcutta: Office of the Superintendent of Government Printing, India. 1895.

*Accounts relating to the Trade by Land of British India with Foreign Countries.* No. 12, for the twelve months, 1st April 1894 to 31st March 1895, compared with the corresponding period of the years 1892-93 and 1893-94. Nos. 1 and 2 for the two months, April and May 1895, compared with the corresponding period of the years 1893 94. Calcutta : Office of the Superintendent of Government Printing, India. 1895.

*Annual Report on the Lunatic Asylums in the Punjab,* for the year 1894. Lahore : The "Civil and Military Gazette" Press. 1895.

*Annual Report on the Condition and Management of the Jails in the North-Western Provinces and Oudh,* for the year ended 31st December 1894. By Sir J. W. Tyler, Kt., C. I. E., M.D., F.R.C.S.E , L.R.C.P.E., L.M.

& L.S.A., London., Inspector-General of Prisons. Allahabad : North-Western Provinces and Oudh Government Press. 1895.

*Twenty Seventh Annual Report of the Sanitary Commissioner for Bengal*, for the year 1894. By Brigade-Surgeon-Lieut.-Col. W. H. Gregg, M.B., M.R.C.P., Lond. Dip Publ. Health., Cantab., Sanitary Commissioner for Bengal. Calcutta : The Bengal Secretariat Press. 1895.

*Administration Report of the Madras Government Museum*, for the year 1894 95. Madras : The Superintendent, Government Press. 1895.

*Anthropometry in Bengal*. By Colonel H. M Ramsay, District Superintendent of Police, Bengal Calcutta : Thacker, Spink and Co. 1895.

*The Diary and Consultation Book of the Agent, Governor and Council of Fort St. George*, 1684. Edited by Arthur T. Pringle. Madras : The Superintendent, Government Press. 1895.

*Report on the Calcutta Medical Institutions*, for the year 1894. By Surgeon-Colonel George C. Ross, Inspector-General of Civil Hospitals, Bengal. Calcutta : The Bengal Secretariat Press. 1895.

*Report on the Jails of the Punjab*, for the year 1894. By Surgeon-Lt. Col. T. L. Bate, Inspector-General of Prisons, Punjab. Lahore : The "Civil and Military Gazette" Press. 1895.

*Annual Report on Emigration from the Port of Calcutta to British and Foreign Colonies*, 1894. By R. Macleod, Esq., M.D., Protector of Emigrants at Calcutta. Calcutta . The Bengal Secretariat Press 1895.

*Notes on the Annual Returns of the Dispensaries and Charitable Institutions of the North Western Provinces and Oudh*, for the year ending 31st December 1894. By Surgeon-Colonel W. P. Warburton, M. D., Inspector-General of Civil Hospitals, North-Western Provinces & Oudh. Allahabad : The North-Western Provinces and Oudh Government Press. 1895.

*Annual Report on Inland Emigration*, for the year 1894. By R. Macleod, Esq, M. D., Superintendent of Emigration, Calcutta. Calcutta : The Bengal Secretariat Press. 1895.

*Archæological Survey of India. The Mogul Architecture of Fatehpur-Sikri* By Edmond W. Smith. Allahabad : The Supdt., Govt. Press, N.-W. P. and Oudh. 1894.

*Reports of the Alipore and Hazaribagh Reformatory Schools*, for the year 1894. Calcutta : The Bengal Secretariat Press. 1895

*Returns of the Rail and River Borne Trade of Bengal*, during the quarter ending 31st March 1895. Calcutta : The Bengal Secretariat Press. 1895.

*Report on the External Trade of Bengal with Nepal, Tibet, Sikkim and Bhutan*, for the year 1894-95. Calcutta : The Bengal Secretariat Press. 1895.

*Progress Report of Forest Administration in the Lower Provinces of Bengal*, for the year 1893-94. By A. E. Wild, Conservator of Forests, Bengal. Calcutta : The Bengal Secretariat Press. 1894.

*Annual Report of Dispensaries in the Punjab*, for the year 1894. Lahore : The "Civil and Military Gazette" Press. 1895.

*Annotated Returns of the Charitable Dispensaries in Bengal*, for the year 1894. By Surgeon-Col. G. C. Ross, Inspector-General of Civil Hospitals. Bengal. Calcutta : The Bengal Secretariat Press. 1895.

*Annual Statistical Returns and Short Notes on Vaccination in Bengal*, for the year 1894-95. By Brigade Surgeon Lieut.-Colonel W. H Gregg, M.B., M R C.P., London, Dip. Publ. Health, Camb., Sanitary Commissioner for Bengal. Calcutta : The Bengal Secretariat Press. 1895.

*Amitav*. Life of Buddha. By Nobin Chundra Sein. Calcutta: The Bharat Mihir Press, 26, Scott's Lane, Calcutta. 1895.

# HEALTH FOR ALL !!

# HOLLOWAY'S PILLS & OINTMENT.

## THE PILLS

Purify the Blood, correct all Disorders of the

**LIVER, STOMACH, KIDNEYS AND BOWEL.**

They invigorate and restore to health Debilitated Constitutions, and are invaluable in all Complaints incidental to Females of all ages. For Children and the aged they are priceless.

## THE OINTMENT

Is an infallible remedy for Bad Legs, Bad Breasts, Old Wounds, Sores and Ulcer. Is famous for Gout and Rheumatism. For disorders of the Chest it has no equal

**FOR SORE THROATS, BRONCHITIS, COUGHS, COLDS,**

Glandular Swellings, and all Skin Diseases, it has no rival; and for contracted and stiff joints it acts like a charm.

Manufactured only at THOMAS HOLLOWAY'S Establishment,

**78, NEW OXFORD STREET (late 533, OXFORD STREET), LONDON.**

And are sold at 1*s.* 1½*d.*, 2*s.* 9*d.*, 4*s.* 6*d.* 11*s.*, 22*s.*, and 33*s* each Box or Pot, and may be had of all Medicine Vendors throughout the World.

☞ **Purchasers should look to the Label on the Pots and Boxes. If the address is not 533, Oxford Street, London, they are spurious.**

## ROYAL INSURANCE CO.

**PROFIT POLICIES**

*Yield handsome returns.*

LARGE FUNDS

AND

MODERATE

RATES

AN

**ENGLISH**

**OFFICE.**

Established in the year 1845.

CALCUTTA:

Agents—

FINLAY, MUIR & CO.,

*21, Canning Street.*

Secretary—

F. J KINGSLEY.

*102, Clive Street.*